ITE

Intermec Terminal Emulator

User's Guide

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Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

Safety Information

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

This section explains how to identify and understand cautions and notes in this document.

A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.

Note: Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

Global Services and Support

Warranty Information

To understand the warranty for your Intermec product, visit the Intermec web site at **www.intermec.com** and click **Support** > **Returns and Repairs** > **Warranty**.

Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided "as is with all faults." All warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

Web Support

Visit the Intermec web site at **www.intermec.com** to download our current manuals (in PDF). To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at **intermec.custhelp.com** to review technical information or to request technical support for your Intermec product.

Telephone Support

In the U.S.A. and Canada, call **1-800-755-5505**.

Outside the U.S.A. and Canada, contact your local Intermec representative. To search for your local representative, from the Intermec web site, click **About Us** > **Contact Us**.

Service Location Support

For the most current listing of service locations, go to **www.intermec.com** and click **Support** >**Returns and Repairs** > **Repair Locations**.

For technical support in South Korea, use the after service locations listed below:

AWOO Systems
102-1304 SK Ventium
522 Dangjung-dong
Gunpo-si, Gyeonggi-do Korea, South 435-776
Contact: Mr. Sinbum Kang
Telephone: +82-31-436-1191
E-mail: **mjyunkang@awoo.co.kr**

IN Information System PTD LTD
6th Floor
Daegu Venture Center Bldg 95
Shinchun 3 Dong
Donggu, Daegu City, Korea
E-mail: **jmyou@idif.co.kr** or **korlim@gw.idif.co.kr**

Who Should Read This Manual

This document is written for the person who is responsible for installing, configuring, and maintaining the Intermec Terminal Emulator (ITE) application.

This document provides you with information about ITE features, and how to install, configure, operate, maintain, and troubleshoot the application.

Before you work with ITE, you should be familiar with your network and general networking terms, such as IP address, and with your terminal emulation system.

Related Documents

This User's Guide is intended to be used with the ***Intermec Terminal Emulator (ITE) Programmer's Reference Manual***. The Programmer's Reference Manual includes complete information on all terminal emulation commands supported by ITE.

You should also have a copy of the user's manual for your Intermec computer. The Intermec web site at **www.intermec.com** contains our documents (as PDF files) that you can download for free.

To download documents

1. Visit the Intermec web site at **www.intermec.com**.
2. Click **Support** > **Manuals**.
3. Use the **Product Category** field, the **Product Family** field, and the **Product** field to help you locate the product whose documentation you want to download.

Document Title	Part Number
Intermec Terminal Emulator (ITE) Programmer's Reference Manual	937-015-xxx
CK3 Mobile Computer User's Manual	935-016-xxx
CK32 I-Safe Handheld Computer User's Manual	935-006-xxx
CK61 Mobile Computer with Windows CE User's Manual	935-021-xxx
CK61 Mobile Computers with Windows Mobile User's Manual	935-000-xxx
CN3 Series Mobile Computer for Windows Mobile 5.0 User's Manual	935-003-xxx
CN3 Series Mobile Computer for Windows Mobile 6.1 User's Manual	935-018-xxx
CN4 Series Mobile Computer User's Manual	935-029-xxx
CV30 Fixed Mount Computer User's Manual	935-005-xxx
CV30 Fixed Mount Computer with Windows CE User's Manual	935-012-xxx

1

Getting Started

This chapter introduces the Intermec Terminal Emulator application and includes these sections:

- **About Intermec Terminal Emulator**
- **Setting Up the Computer and the Network**
- **Installing ITE On Your Intermec Computer**
- **Launching ITE**
- **Managing ITE Tasks**

About Intermec Terminal Emulator

The Intermec Terminal Emulator (ITE) application allows your Intermec computer to emulate 3270, 5250, and VT/ANSI terminals. ITE is supported by these Intermec computers:

- CK3 Mobile Computer with Windows Mobile 6.1
- CK32 Mobile Computer with Windows Mobile 5.0
- CK61 Mobile Computer with Windows Mobile 5.0 or Windows CE 5.0
- CN3 Mobile Computer with Windows Mobile 5.0 or Windows Mobile 6.1
- CN4 Mobile Computer with Windows Mobile 6.1
- CV30 Fixed Mount Computer with Windows Mobile 5.0 or Windows CE 5.0.

About ITE Licensing

Using ITE requires a license. For general information on licensing, see the Intermec SmartSystems™ Foundation documentation for instructions on how to acquire, import, and distribute licenses to your mobile computers.

A licensing client file will need to be installed on your mobile computers if it is not present. These files can be downloaded from the Intermec web site.

If ITE is currently running but needs a new license - for example, if an upgrade is necessary - exiting and restarting ITE should automatically request a new license from the server.

When ITE is exited using the menus, as opposed to simply shutting off the mobile computer, ITE may attempt to check its license back into the license pool (concurrent use). If the number of licenses available is less than the total number of potential users, it is possible that this mobile computer would not be able to retrieve a license for ITE the next time the user attempts to launch it.

Program Names

The following chart lists computers and related program names. TE/IP/802.11 or TE/UDP Plus/802.11 are the feature options.

Computer Model	ITE Program Name
CK3	TECCK3_R
CK32	TECCK32R
CK61	TECCK60R
CN3/CN4	TECCN3_R
CV30	TECCV30R

Setting Up the Computer and the Network

ITE can be ordered preinstalled on your Intermec computer.

If you need to install ITE on your computer, follow these steps to set up your computer and network.

To set up your computer and network for ITE

1. For UDP Plus network connections, configure the Intermec Application Server or other Intermec gateways.

   For TCP/IP connections, configure the host.

   For more information, see the next section, "About ITE and Network Protocols."
2. Configure the access point for your network.
3. On your computer, use the Intermec Settings application to configure the computer to communicate with your RF network.
   - For basic information on using Intermec Settings, see the computer user's manual.
   - For specific information on Intermec Settings parameters, see the ***Intermec Settings Command Reference Manual***.
4. Verify that your computer is communicating correctly with the access point and Intermec Application Server or the host. For more information, see the computer user's manual.

About ITE and Network Protocols

ITE applications use one of the following network protocol options. For network configuration options, refer to your computer's user manual.

Network Protocol Options

Protocol	Description
TCP/IP	The computer communicates through access points directly connected to the host computer on an Ethernet or a token ring network.
RTC (real time controller) over TCP	Allows a client session to persist on mobile computer clients. This functionality is provided by the Session Persistence Server running as a service under the SmartSystems Foundation, and supported in VT/ANSI, 5250, and 3270 emulations. For additional information, see Appendix C, **"Configuring and Managing the Session Persistence Server."**
UDP Plus	The computer communicates with the host computer through the Intermec Application Server and an access point.

Installing ITE On Your Intermec Computer

If you use SmartSystems Foundation to manage your Intermec computer, you only need to drag-and-drop the bundle as usual to install ITE. For more information, see the SmartSystems Foundation documentation.

If you do not use SmartSystems Foundation, follow the next procedure to download the bundle and extract the necessary application files for your Intermec computer.

To install ITE without using SmartSystems

1. Go to **www.intermec.com** and choose **Support** > **Downloads**.
2. Choose your Intermec computer from the Select a Product list.
3. In the Applications list, choose the ITE self-extracting bundle, and follow the prompts to download the bundle to your PC.
4. On your PC, double-click the bundle and follow the prompts to extract the files. By default, the files are extracted to C:\Program Files\Intermec\SmartSystem\SS_Lib\Software\ITE_<*computer model*>_<*ITE version*>.
5. Copy the files to the computer:
   a. Open an ActiveSync connection to the computer and copy the TE<*computer model*>_.cab file to the \cabfiles directory.
   b. Warm boot the computer. ITE is installed automatically.

   Or,
   a. Copy the files to a storage card (2 MB space required) and install the card in the computer.
   b. On the computer, browse to the .cab file and double-tap the file to install the ITE components.

Launching ITE

By default, the ITE application auto-starts after reboot on all computers.

If ITE does not auto-start when the computer is booted:

- For Windows Mobile platforms, tap **Start** > **Programs** > **ITE**.
- For Windows CE platforms, double-tap the ITE desktop icon.

Note: To prevent ITE from auto-starting, you can enable the "No Auto-Start" setting for ITE using Intermec Settings on the computer. For more information on using Intermec Settings, see **"Configuring ITE Settings" on page 21.**

After ITE initializes, the main screen appears. Depending on whether or not the onscreen Soft Input Panel (SIP) are enabled, you see one of these screens:

ITE Main Screen Without SIP

ITE Main Screen With SIP

Note: By default, ITE screens show white text on a black background. For better readability in this manual, all ITE screens shown in this manual show black text on a white background. The content and options in each screen may differ slightly depending on your computer and operating system.

The section along the bottom of the screen is the Toolbar, which includes useful information and several buttons you use while running ITE. The Toolbar appears at the bottom of the screen whether the SIP is enabled or not.

You can configure the Toolbar contents as necessary. For help, see **"About Computer Display Options" on page 69.**

ITE Toolbar

Note: ITE supports double-byte fonts if your computer operating system uses them.

For more information on operating systems that support double-byte fonts, contact your Intermec representative.

Managing ITE Tasks

To Do This Task	See This Section
Change ITE settings and parameters, including communication and bar code settings, and protocol and display options	"Changing Setup Parameters With the ITE Menus" on page 23.
Adjust ITE screen size/mode and annunciators, or customize the Toolbar and Menu contents	"Changing Display Options" on page 59.
Test the computer keypad and scanner	"Testing Peripherals" on page 77.
Get current ITE version information	"Viewing ITE Version Information" on page 79.
Exit the configuration menus and return to ITE	"Exiting the Configuration Menus" on page 80.
Configure keyboard options	"Configuring Keyboard Options" on page 80.
Save configuration changes	"Saving Configuration Changes to ITE" on page 82.
Configure session options	"Configuring Sessions" on page 83.

Quick Configuration

Follow the next procedure to quickly configure ITE and connect to a host.

To quickly configure ITE

1. When ITE is running, double-tap the upper right corner of the computer screen.

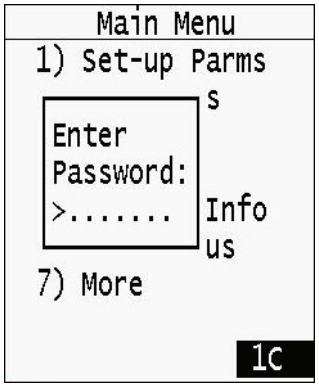
   Or, tap the Menu button [M] in the Toolbar and choose ITE Menus from the popup list.

   You can also scan the following bar code to access the Main Menu. Code 39 Full ASCII must be enabled in the firmware (default is disabled).

   ITE configuration menus

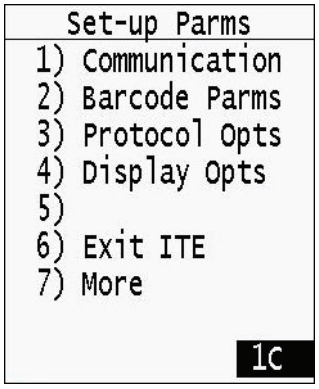
   %TECFG

2. In the Main Menu, tap **Set-up Parms** or press **1**. The Enter Password dialog box appears.

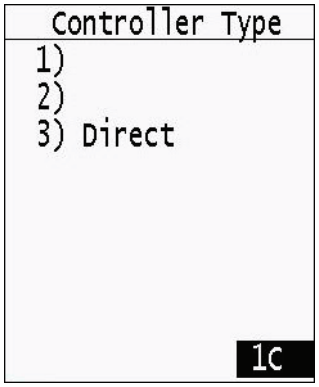


3 Type the password. The default is `cr52401`.

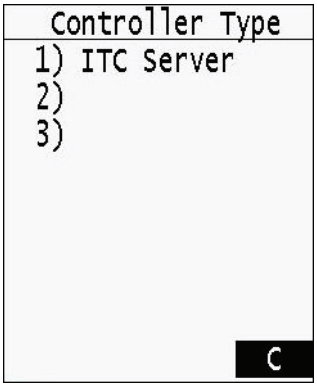
When you enter the last password character, the Set-up Parms screen appears.



4 Press **1** to choose **Communication**. The Communication screen appears. Depending on the network protocol you enabled on the Intermec computer, the Communication screen looks like this:



TCP/IP Protocol: *The screen looks like this for direct TCP/IP connections to a host.*



UDP Plus: *The screen looks like this for UDP Plus connections to a controller.*

Note: If you need to connect to a controller and you see the screen on the left, you need to use Intermec Settings to enable UDP Plus on the computer.

5 For a direct connection:

- **a** Press **3**. The Host Setup screen appears.
- **b** Press **2**. The Host screen appears.
- **c** Press **1**. The Host Name (A) screen appears.
- **d** Enter the IP address or DNS name of the host. Valid length is up to 64 characters.
- **e** Press **Enter** twice. The Emulation screen appears.
- **f** Choose an emulation type by pressing the corresponding number key.

Or, for a connection to a controller:

a Press **1**. The ITC Server screen appears.

b Press **2**. The Server Setup screen appears.

c Press **1**. The Server A screen appears.

d Enter the IP address or DNS name of the controller. Valid length is up to 64 characters.

e Press **Enter**. The Host Setup (A) screen appears.

f Press 4 and choose an emulation type by pressing the corresponding number key.

6 Press **Enter** several times until the Main Menu appears.

7 Press **6**. The Save Parms screen appears.

8 Press **Y** to save your changes and exit the configuration menus.

For more information on configuring these connections, see **"Changing Communication Settings" on page 25.**

2

Using ITE Applications

This chapter describes keypresses specific to each type of terminal emulation and includes these sections:

- **About ITE Applications**
- **About Annunciators**
- **About 3270 Emulation Mode**
- **About 5250 Applications**
- **About VT/ANSI Applications**

About ITE Applications

This chapter describes how to use the Intermec Terminal Emulator application for your particular computer.

For the ITE 3270 application, Intermec emulates an IBM-3278-2 computer.

For the ITE 5250 application, Intermec emulates the following:

- IBM-5291-1 computer
- IBM-5555-B01 and IBM-5555-C01 computers (If a double-byte CAB file is installed, a localized operating system is running for a double-byte country, or depending on the Use Color setting).
- IBM-5292-02 computer (If the 5250 color option is enabled).
- IBM-3477-FG and IBM-3477-FC computers (If 132 column mode is selected, depending on the Use Color setting).

About Annunciators

The computer display reserves a location for annunciators (icons) that monitor RF and network communications or alert you to a condition that requires action. For information about computer icons that indicate battery condition and general operational status, see the computer user manual.

3270 Annunciators

Icon Name	Icon	Position	Description
Session number	1, 2, 3, 4	1	The session number of the ITE application.
Input inhibit	X	2	The keyboard has accepted enough information for the defined input field. The "key-ahead" feature stores keystrokes after the "input inhibited" annunciator appears. These are saved for the next field. This overrides Insert Mode if both are active.
Insert mode	^	2	The keyboard inserts characters instead of overwriting them.

5250 Annunciators

Icon Name	Icon	Position	Description
Message waiting	M	1	The host has a message waiting for the operator. This overrides Session Number if both are active.
Session number	1, 2, 3, 4	1	The session number of the ITE application.
Input inhibit	X	2	The keyboard has accepted enough information for the defined input field. The "key-ahead" feature stores keystrokes after the "input inhibited" annunciator appears. These are saved for the next field. This overrides Insert Mode if both are active.
Insert mode	^	2	The keyboard inserts characters instead of overwriting them.

5250 Annunciators (continued)

Icon Name	Icon	Position	Description
Hebrew mode	H	3	If the start of header is set for right to left data input and a 5250 bidirectional Hebrew screen was received.
RTL mode	<	4	If the data input mode when operating in Hebrew is set for right to left, then the cursor is set in a right-to-left mode.

VT/ANSI Annunciators

Icon Name	Icon	Position	Description
Session number	1, 2, 3, 4	1	The session number of the ITE application.
Input inhibit	X	2	Keyboard action mode (KAM) was set. The computer ignores all keystrokes that send characters to the host. This state stays on until KAM is reset. This overrides Insert Mode if both are active.
Keypad mode	K	2	The computer is in Keypad mode.
Character mode	C	2	Computer is in Character mode, sending each character as pressed.
Line Edit (block) mode	B	2	The computer is in Line Edit (block) mode. When you press a terminating key, the computer sends a block of characters to the host.
Local Edit mode	e	2	The computer is in Local Edit mode, which is a feature of the VT330/VT340 computer.

About 3270 Emulation Mode

This section describes keypresses specific to 3270 emulation mode.

3278 SNA Keys

To enter an SNA Key, press the keys or scan the bar codes. For instructions and codes, see Appendix A, **"Bar Code Scanning."**

3278 SNA Keys

Key	Description
Clr	Erases the current unprotected field. Also sets the MDT bit and does a reverse tab. A beep means the field is protected and cannot be erased.
Del	Deletes the character over the cursor in the current unprotected field. Data to the right of the cursor shifts left one position. A beep indicates the character is in a protected field and cannot be erased.
Enter	Transmits all modified data fields to the host.
EOF	Erases all data from the position of the cursor to the end of the unprotected field. The cursor remains in the same location. A beep indicates that the field is protected.

3278 SNA Keys (continued)

Key	Description
Home	Sends the cursor to the unprotected field in the display buffer. The first unprotected field is determined by the Insert Cursor order.
Insert	Toggles between insert and normal mode. In insert mode, characters are inserted instead of overwritten.
Reset	Resets from an error condition. The TAB key will also perform the reset function while the terminal input is inhibited.

AID-Generating Keys

An AID-generating key causes a data transmission to the host system, which alerts the host via an AID code that the current session requires some action. ITE emulates all of the AID-generating keys on a 5291 Display Station.

AID-Generating Keys

Key	Description
Clear	This key clears the data buffer but leaves the keyboard unlocked. It sends the Clear AID key value to the host.
Programmable function keys F1-F24	These keys send modified input fields and AID key values to the host. The keys lock the keyboard until the host unlocks it. The function keys are used exclusively for 3270 AID key emulation. When you press a programmable function key or scan its bar code, you send the data on the screen to the host, and the function you specified is performed on this data. Each function is determined by the application you use with your system. See the application's user's manual for details.
Program Access (PA) keys 1-3	PA1, PA2, and PA3 send the AID key value to the host but leave the keyboard unlocked. When an operator presses a PA key, one of the following AID codes is returned along with the current cursor address on the normal LU-LU (logical unit) flow. No data is returned to the AS/400 system with any PA key. PA AID X6C; PA AID X6E; PA AID X6B

About 5250 Applications

This section describes several features of the ITE 5250 emulation mode.

Special Function Keys

This section describes the special function keys. To enter a special function key, press the keys listed in the chapter for the computer or scan the bar codes listed in Appendix A, **"Bar Code Scanning."**

For complete descriptions, refer to the appropriate IBM 5250 reference manual.

AID-Generating Keys

AID-generating keys generate AID codes that go in the display data stream to the host system. They alert the host system that the Intermec Application Server or controller requires some action. ITE emulates all of the AID-generating keys on a 5291 Display Station.

AID-Generating Keys

Key	Description
Clear	The system environment determines the results of this key. If the computer is in session, [CLEAR] issues the AID code hex BD, which requests the host system issue a Clear Unit command to the computer to clear the display. If not in session, [CLEAR] clears the entire display regeneration buffer.
Enter/Rec Adv	Enters information.
F1-F24	User-defined command functions. Refer to your application's user manual for detail on the functions.
Help (nonerror state)	Issues a hex F3 AID byte to the host system.
Print	Tells the controller that the operator wants to print the contents of the present display. Issues hex F6 to the host system.
Record Backspace (Home)	When pressed with the cursor in the home position, a record backspace is requested. The AID code hex F8 and cursor address are sent to the host system.
Roll Up and Roll Down	Roll display up or down one page. Roll Up issues AID code hex F5. Roll Down issues AID code hex F4.

Roll Keys

Roll Up and Roll Down are AID keys the computer sends to the host to request and display additional screens. The host transmits a new screen in response to this command. The new screens allow you to view data either above or below what appears on the current screen.

Roll Up and Roll Down should not be confused with the Roll command. 5250 computers support the Roll command (hex 23) received from a host application. Using this command, a host application can roll an area of the screen up or down. The direction of the roll and number of lines to roll are specified in the command.

- A Roll command moves the screen, but not the window/viewport. The screen scrolls through the window/viewport when you roll up or down, but the window/viewport remains stationary. The Roll keys cause the host to send down additional screens when you are at a Roll screen. A Roll screen typically has text in the lower right-hand corner of the screen to indicate there are additional screens to view.
- Paging keys (window/viewport page up, window/viewport page down, window/viewport page right, window/viewport page left) move the viewport within one screen. They do not move the screen itself.

Cursor Keys

You can manually move the computer window/viewport by using the cursor keys and paging keys. For more information about the window/viewport, refer to the computer user's manual.

Field Exit Key

Field Exit exits an input field and moves the cursor to the beginning of the next input field. If you press this key while the cursor is between characters, all characters in the field to the right of the cursor are erased.

Signal Keys

Signal keys cause a Signal command to go from the controller to the host system.

Signal Keys

Key	Description
Attention	Press this key to alert the host system that the function request (such as [ENTER]) is not honored. Attention is valid when the keyboard is locked or unlocked. It does not change the keyboard state or the cursor location.
Help (from error state)	Operator uses this key to request the host system send data about the error to the display.

Special Control Keys

Use special control keys to change operator-generated information in the display. These keys do not work when the keyboard is locked.

Special Control Keys

Key	Description
Delete	Deletes the character in the position where the cursor was located. All remaining characters in the field shift to the left to fill the column.
Erase Input	Clears all fields to nulls, and cursor moves to the first input position on screen. This command does not erase protected fields. If you press this key when the screen shows only protected fields, the cursor returns to the home position.
Error Reset	Restores the original data on the error line of the display and resets the state.
Hex	Enters hexadecimal codes from the keypad to generate EBCDIC characters needed for input or display.
Home	Moves the cursor to the position specified by the insert cursor (IC) address.
Insert	Sets or turns off the insert mode for the input field the operator has the cursor in. The operator must reset the insert state before exiting it, by either pressing **Reset** or **Insert** again.
Shift Lock	Puts the keyboard into shift lock mode.

Special Host Key

The special 5250 host key is System Request.

Special Host Key

Key	Description
System Request	Data on the error line is saved, the error line is cleared, a column separator and underscore field attribute are supplied to column 1 of the error line, and the cursor is located under column 2 to begin polling keystrokes.

Additional Functions

This table lists additional operations you can perform on your computer. To enter an operation, press the keys listed in the chapter for the computer or scan the bar code listed in Appendix A, **"Bar Code Scanning."**

5250 Additional Functions

Function	Description
¢ (cent sign)	Enters a cent sign.
↵ (New Line)	Moves the cursor to the first unprotected character position of the first line in the screen. If the screen is a protected field, the cursor returns to the home position.
¬ (Not symbol)	Enters a Not symbol.
Back Tab	Moves the cursor back to the most recent first field position. If in the middle of a field, it moves it to the first position of the same field. If the cursor is at the first position of a field, it moves it to the first position of the preceding input field.
Dup (duplicate enabled fields only)	Controller repeats hex "1C" from the cursor position to the end of the field (appears as an overstruck asterisk).
Field-	Advances cursor to the previous input field. For numeric fields, makes the input a negative number.
Field+	Advances cursor to the next input field. For numeric fields, makes the input a positive number.
Field Mark	This is valid within any unprotected entry input field in which the Dup or Field Mark key is allowed (FFW bit 3 set to on). The Field Mark character (X`1E') is displayed as an overscore on IBM 5251 Display Stations and as a space on all other supported workstations. If an operator presses the Field Mark key in an entry field that does not allow the Dup or Field Mark key, operator error 0019 is posted. The Field Mark code point is allowed in an outbound data stream.
Forward Tab	Moves the cursor to the first position in the next input field.

System Messages

The computer screen reserves a line for status information. The status line can display system (non-local) information such as a message waiting from the host computer, help messages in response to the Help key, or the system request state of the computer.

About VT/ANSI Applications

The following information pertains to VT/ANSI computers.

Main Keypad

The VT/ANSI main keypad consists of standard keys and function keys. Standard keys generate letters, numbers, and symbols. Function keys generate special function codes. The following table describes the keys.

VT/ANSI Main Keypad

Keys	Description
Control	Used with another key to send a control code.
Delete	Operation depends on how the DEL to BS option is set in the TE configuration menus. The key either sends a delete (DEL, 7F hexadecimal) or a backspace (BS, 08 hexadecimal).
Lock	Used with shift-lock, which sets/clears shift-lock.
Enter	Sends either a CR character (0D hexadecimal) or a CR character (0D hexadecimal) and an LF character (0A hexadecimal), depending on the set or reset state of line feed or new line mode (LNM).
Shift	Used with other standard keys to send uppercase characters.
Space bar	Sends an SP character (20 hexadecimal).
Tab	Sends a horizontal tab (HT) character (09 hexadecimal).
Compose character	Not supported.

VT/ANSI Editing Keypad

The editing keypad has editing keys and cursor (arrow) keys.

Cursor Keys

You can use cursor keys and paging keys to manually move the computer window/viewport. See the computer user's manual for more information.

Editing Keys

Editing keys have functions assigned to them by the application software in use. See your application documentation for information about editing key functions. Editing keys are Find, Insert, Next Screen, Previous Screen, Remove, and Select.

To enter an editing key

- Press the keys listed in the section for the computer or scan the bar codes listed in Appendix A, **"Bar Code Scanning."**

VT/ANSI Auxiliary Keys

The VT/ANSI auxiliary keypad consists of numeric keys (which enter numeric data) and programmable function (PF) keys. The following chart describes VT/ANSI auxiliary keypad operations.

VT/ANSI Auxiliary Keys

Key	Description
0-9	Enters numeric data.
- (hyphen)	Enters a hyphen character.
, (comma)	Enters a comma character.
. (period)	Enters a period character.
Enter	Sends CR, CRLF, or SS# M, depending on the mode settings.
PF1-PF4	The application software in use assign operations to these PF keys. See the application's software manual for programmed uses of these keys.

To enter an auxiliary key

- Press the keys while the computer is in Keypad mode, or scan the bar code in Appendix A, **"Bar Code Scanning."**

VT/ANSI Top-Row Function Keys

VT220/320/340 computers support function keys [F1]-[F20]. Keys [F1]-[F4] are used for hold screen, print screen, set-up, data/talk, and break. For VT220/320/340, [F1]-[F4] are PF1-PF4.

VT/ANSI Top-Row Function Keys

Key	Description
F6-F20	User-defined keys (UDKs) that have operations assigned to them by the application software in use. Refer to your application's software manual for their uses.

Note: VT100 computers only support top-row function keys [F11] (Escape), [F12] (Backspace), and [F13] (Line feed).

To enter a top-row function key

- Press the keys listed in the section for the computer or scan the appropriate bar code in Appendix A, **"Bar Code Scanning."**

Transmission Mode

Use the transmission mode (labeled "Mode" on the overlay) to toggle between Line Edit (block) mode and Character mode.

When Lock mode is disabled (default), pressing the Mode key toggles between Line Edit (block) mode and Character mode. Enable Lock mode to disable toggling. You can configure Lock mode with the configuration menus. For more information, see **"Configuring Protocol Options" on page 43.**

For more information on transmission modes, see the ***Intermec Terminal Emulator (ITE) Programmer's Reference Manual***.

Local Edit Mode

If your application software program supports local editing, you can use the computer in Local Edit Mode, a feature of the VT330/ VT340 computer. For more information, see the ***Intermec Terminal Emulator (ITE) Programmer's Reference Manual***.

Printing and Serial Scanning

You can print data from a VT/ANSI host. To connect your computer to a printer, refer to the computer's user manual for instructions. To configure printing and serial scanning options, see **"Choosing VT/ANSI Options" on page 52.**

The next table defines the print modes you can use with the ITE VT/ANSI application.

Print Modes

Print Mode	Description
Auto print	Prints each line after the cursor leaves that line using a carriage return or when auto-advancing through fields. This mode can be turned on and off from a VT/ANSI host.
Printer controller	Prints all data from a VT/ANSI host. Turn this mode on or off from the host as all host screens are printed without allowing the user to respond. You cannot log on or off while in this mode.
Print cursor line	Prints the line that the cursor is on. This mode can only be turned on from a VT/ANSI host and turns off after the line prints.
Print form feed	After a screen is printed, the printer advances the printed screen out of the printer. This mode can be turned on and off from a VT/ANSI host.

To send commands from the host

- See the programming guide for your VT/ANSI host.

3

Configuring and Managing ITE

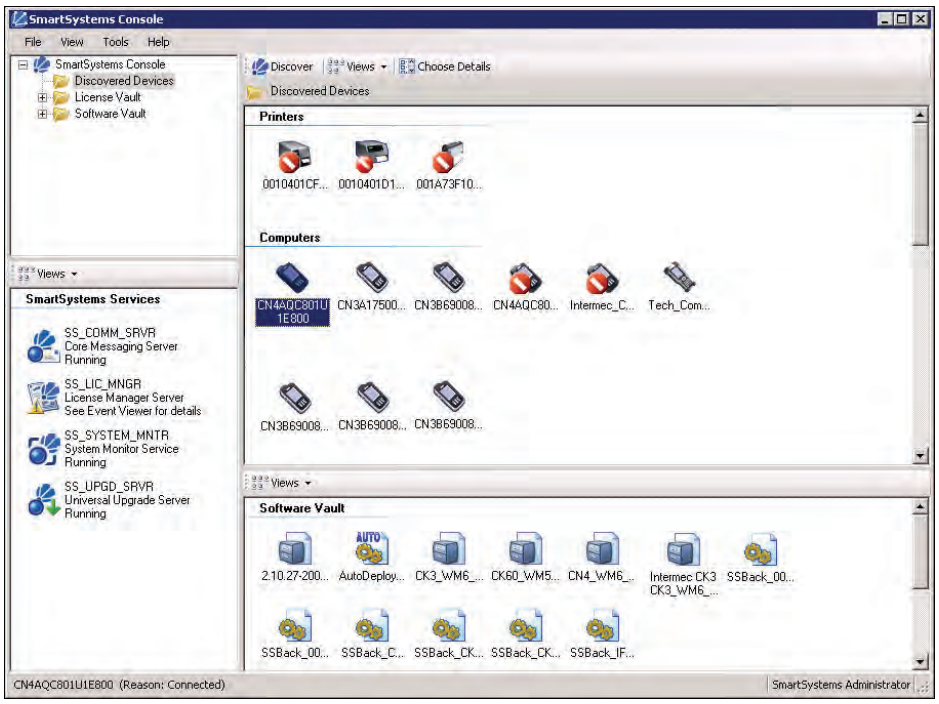
This chapter explains how to configure the Intermec Terminal Emulator application by choosing options, and how to use ITE to accomplish other tasks such as testing peripherals or viewing version information.

This chapter includes these sections:

- **Managing ITE With SmartSystems Foundation**
- **Configuring ITE Settings**
- **Changing Setup Parameters With the ITE Menus**
- **Configuring the Computer Display**
- **Testing Peripherals**
- **Viewing ITE Version Information**
- **Exiting the Configuration Menus**
- **Configuring Keyboard Options**
- **Saving Configuration Changes to ITE**
- **Configuring Sessions**
- **Using Voice over IP**
- **Using the SnapShot Feature**

Managing ITE With SmartSystems Foundation

Intermec's SmartSystems™ Foundation is a software platform that lets you manage all of your SmartSystems-enabled devices simultaneously from a central server. The SmartSystems console displays all SmartSystems-enabled computers and peripherals in your network.



Intermec SmartSystems Foundation Console

Through the console, you can:

- drag-and-drop ITE configuration bundles (as well as bundles for other applications), operating system updates, and firmware upgrades to multiple computers.
- save ITE configuration settings from a single computer to a te_settings.ini file and deploy the file to many computers simultaneously.
- remotely change ITE application settings and other device settings on SmartSystems-enabled computers.

The SmartSystems console can report on asset locations and battery status, making it easier to manage your mobile devices.

With an AutoDeploy license, SmartSystems can automatically push software, configuration settings, and other files to connected computers. The license also enables Scan-to-Connect, which makes connecting additional devices to your wireless network as easy as reading bar codes.

SmartSystems Foundation can be downloaded at no charge from the Intermec web site. For more information, visit **www.intermec.com\SmartSystems**. To purchase an AutoDeploy license, contact your local Intermec sales representative.

Configuring ITE Settings

You can configure ITE specifically for your work environment. For example, in addition to selecting the type of terminal emulation, you can set the display font, screen size and colors, or enable an RFID reader connected to the computer.

ITE operating parameters can be viewed and changed by:

- using the Intermec Settings application on the computer. When you use Intermec Settings, you can change all settings except for Toolbar and ITE Menu options. Intermec Settings can be accessed either remotely via the SmartSystems Foundation console, or directly on the computer. For help, see the next section.
- using the ITE Menus while ITE is running on the computer. When you use the menus, you can change all settings including Toolbar and ITE Menu options. For more information, see **"Changing Setup Parameters With the ITE Menus" on page 23.**

Note: Certain parameters may depend on the options available in your Intermec computer, or on global settings set elsewhere on the computer. For example, bar code symbology settings for ITE are based on the symbology parameters in the Intermec Settings application by default. However, you can enable the setting of bar code parameters by ITE on a per-session basis, which temporarily overrides the Intermec Settings application.

Configuring ITE with Intermec Settings

There are two ways to access Intermec Settings:

- Remotely via Intermec SmartSystems Foundation. When you use SmartSystems, you can remotely configure ITE settings on all your SmartSystems-enabled computers. For more information, see the next section.
- Directly on the computer. Using Intermec Settings on the computer changes only the settings on that computer. For more information, see **"Using Intermec Settings on the Computer" on page 22.**

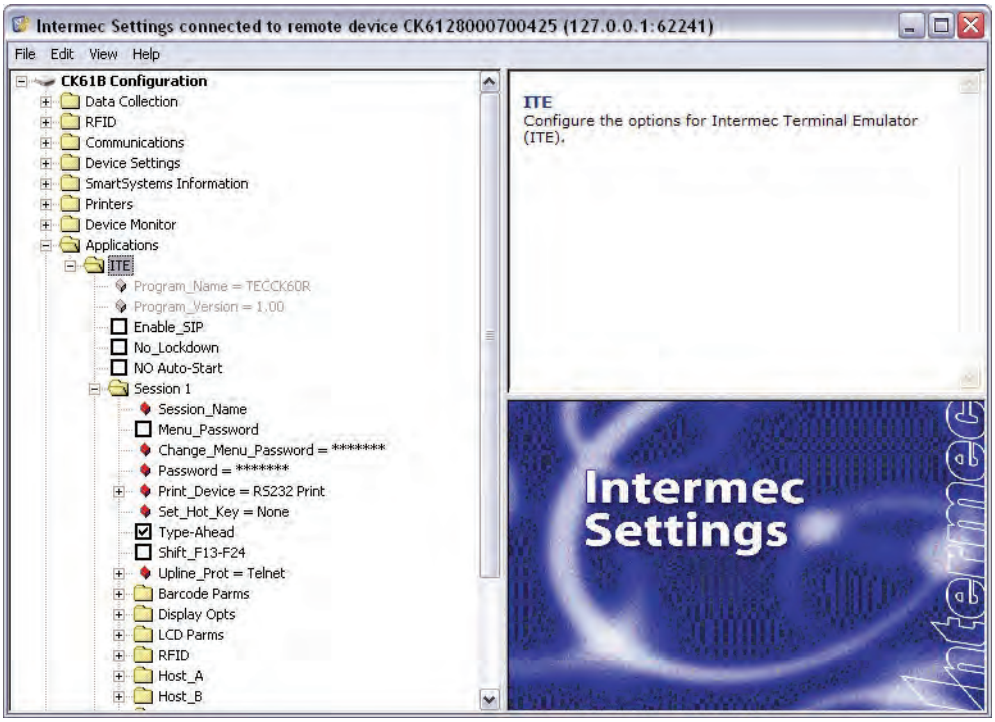
Note: To change Toolbar or ITE Menu settings, you need to use the ITE Menus. For help, see **"Changing Setup Parameters With the ITE Menus" on page 23.**

Using Intermec Settings Remotely With SmartSystems Foundation

For more information on SmartSystems, see **"Managing ITE With SmartSystems Foundation" on page 20.**

To open Intermec Settings from the SmartSystems console

1. In the SmartSystems console, right-click a computer.
2. Select **Intermec Settings**. The Intermec Settings browser window appears.
3. In the browser, choose **Applications** > **ITE**.



4 Change settings as needed. As you choose parameters, information on each parameter appears in the upper right-hand pane.

5 When you are done making changes, choose **File** > **Save Settings**.

For help with using Intermec Settings, in the browser click **Help** > **Contents**.

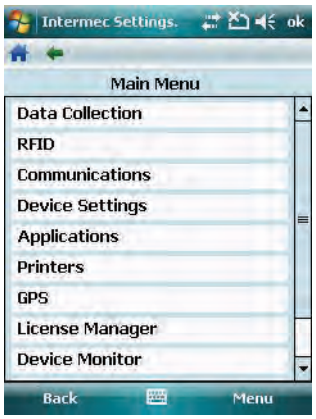
For information on all parameters in Intermec Settings, see the *Intermec Settings Command Reference Manual*.

Using Intermec Settings on the Computer

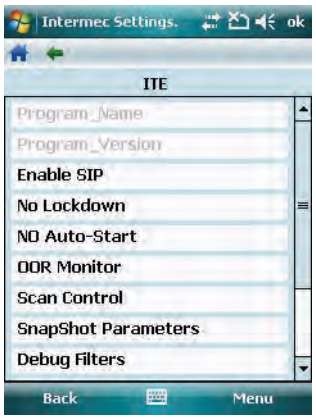
You can use Intermec Settings directly on the computer to configure ITE settings.

To configure ITE settings using Intermec Settings on the computer

1 On the Intermec computer, tap **Start** > **Settings** > the **System** tab > **Intermec Settings**. This example shows the Intermec Settings main screen on a CN4 Mobile Computer:



2 Tap **Applications** > **ITE**.



From here, you can tap menu bars to see lists of configurable items and change settings. For more information on using Intermec Settings on the computer, see the computer user's manual.

Changing Setup Parameters With the ITE Menus

This section explains how to use the ITE Menus to configure ITE setup parameters. The menus are password-protected to prevent unauthorized users from changing settings.

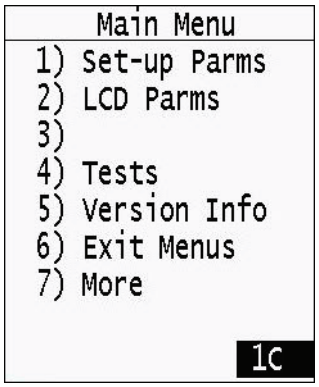
When you change ITE settings this way, the new settings apply to the current session. If more than one session is available, you can verify or change the current session before going to the next session. For more information, see **"Configuring Sessions" on page 83.**

Note: You can customize parameters in the TE_Settings.ini setup file so that parameters are set a specific way each time you run ITE. For more information, see Chapter 4, **"Customizing Your Configuration."**

To configure ITE setup parameters

1 When ITE is running, double-tap the upper right corner of the computer screen. Or, tap the Menu button [M] in the Toolbar and choose ITE Menus from the popup list.

The Main Menu appears:

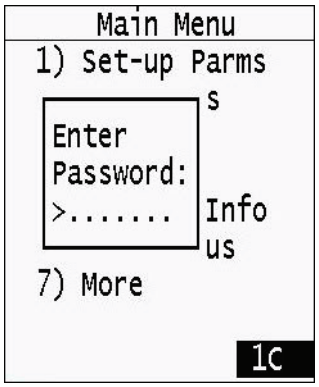


You can also scan this bar code to access the Main Menu. Code 39 Full ASCII must be enabled on the computer (disabled by default).

ITE configuration menus

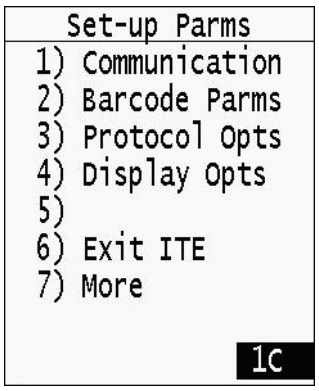
%TECFG

2 Tap **Set-up Parms** or press **1**. The Enter Password dialog box appears.



3 Type the password. The default is `cr52401`.

When you enter the last password character, the Set-up Parms screen appears.



From here, you can configure settings for:

- ITE communications options. For help, see the next section.
- bar code scanning options, such as concatenation of scanned bar codes and overflow handling. For help, see **"Configuring Bar Code Scanning Options" on page 35.**
- bar code symbology decode options, such as symbology maximum and minimum lengths and drop character values. For help, see **"Configuring Bar Code Symbology Options" on page 39.**
- protocol options specific to each type of terminal emulation. For help, see **"Configuring Protocol Options" on page 43.**
- the way ITE is displayed on the computer, including default colors and font, cursor appearance, and hot spots. For help, see **"Changing Display Options" on page 59.**
- password protection for access to the ITE menus. For help, see **"Enabling the Configuration Menu Password" on page 64.**
- the printer to use while running ITE. For help, see **"Setting a Print Device" on page 66.**
- the COM port to use with the CV30 computer. For help, see **"Setting the COM Port (CV30 only)" on page 67.**
- SnapShot network configuration, including username, password, and host. For help, see **"Configuring SnapShot Network Settings" on page 90.**
- an RFID reader connected to the computer. For help, see **"Connecting to an RFID Reader" on page 67.**

Changing Communication Settings

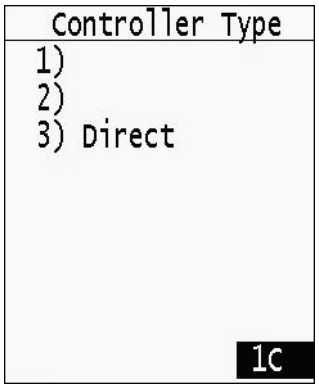
The way you configure communication settings depends on the network protocol:

- To configure settings for a TCP/IP connection, see the next section, "Configuring a Direct Connection."
- To configure settings for a UDP Plus connection, see **"Configuring for UDP Plus" on page 32.**

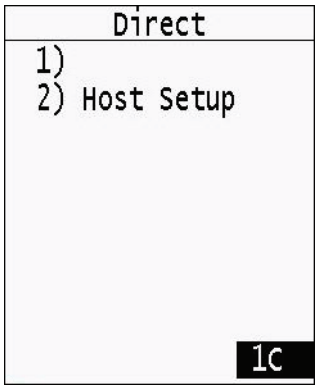
Configuring a Direct Connection

1 Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**

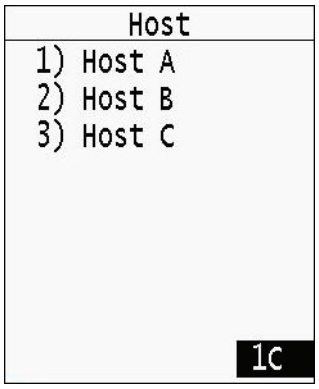
2 In the Set-up Parms screen, tap **Communication** or press **1**. The Controller Type screen appears.



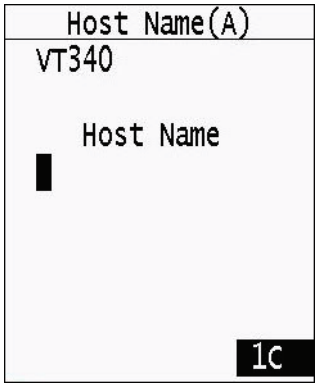
3 Tap **Direct** or press **3**. The Direct screen appears.



4 Tap **Host Setup** or press **2**. The Host screen appears.

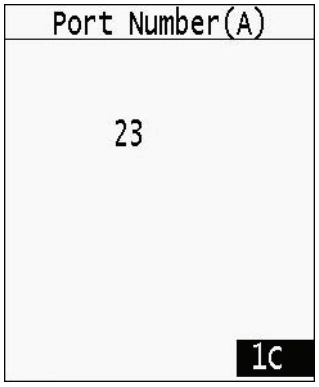


5 Tap a host in the list or press the corresponding number key. The Host Name screen for the host appears.



6 Enter the host name for this host. The host name can be 1 to 64 characters long.

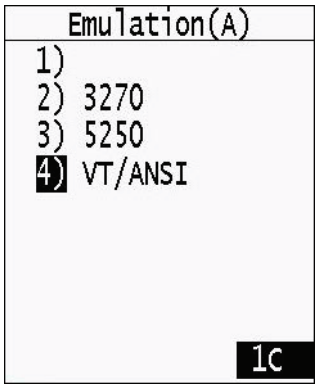
7 Press **Enter**. The Port Number screen for the host appears.



The default port number for all hosts is 23.

8 Enter the port number for this host. Valid range is 0 to 65535.

9 Press **Enter**. The Emulation screen appears.

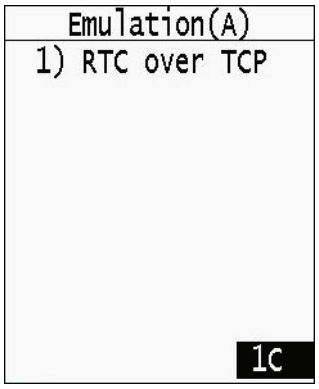


VT/ANSI emulation is selected by default.

10 Tap an emulation type or press the corresponding number key to select an emulation type.

Note: You can also set the emulation type as described in **"Configuring Protocol Options" on page 43.**

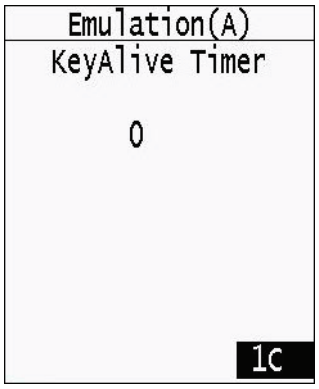
11 Press **Enter**. This screen appears:



12 Tap **RTC over TCP** or press **1** to enable this feature. If you enable RTC over TCP, press **Enter** and enter the Unit Number in the next screen.

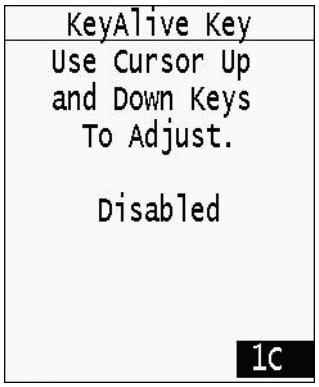
For more information, see **"About RTC over TCP" on page 31.**

13 Press **Enter**. This screen appears:



14 Enter a value for the KeyAlive timer. Valid range is 0 to 120 (minutes). For more information, see **"About the KeyAlive Function" on page 32.**

15 Press **Enter**. This screen appears:



16 Set the KeyAlive value as follows:

a Scroll through the list of key values using the arrow keys. The Up arrow moves up one entry, the Down arrow moves down one entry, the Left arrow skips to the top of the list, and the Right arrow skips to the bottom of the list.

b Select a key value from the list: Disabled, F1 - F24, Attn, Clear, Enter, FldExit, Home, Reset, Roll Down, Roll Up, Help, Print, Sysreq.

c Press **Enter**. The Host screen appears.

Note: When the key value is changed, any connected session will be disconnected and then reconnected as soon as you exit the configuration menus. The key value is saved in the te_settings.ini file.

For more information, see **"About the KeyAlive Function" on page 32.**

17 Press **Enter** to return to the Set-up Parms screen.

Nominating an SSH Session

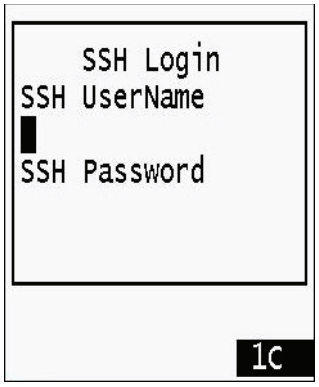
When you configure a direct connection, you can nominate an SSH session as follows.

To nominate an SSH session

1 Follow Steps 1 to 4 of the procedure for **"Configuring a Direct Connection" on page 26.**

2 At the Host Setup screen, select **Host A**.

3 At the Port Number screen, change the port number to 22 and press **Enter**. This screen appears:



4 Enter the user name, press **Tab**, and enter the password.

5 Enter subsequent settings as appropriate.

6 Save your changes as described in **"Exiting the Configuration Menus" on page 80.**

If you do not enter a user name and password as described in Step 4, or if you specify an SSH username and password without saving your changes, the SSH Login screen appears the next time you nominate an SSH session. Enter your username and password, and press **Enter** to continue.

SSH Server Application Programming Hints

Intermec SSH Client is compatible with most open source SSH servers. Because host implementations of SSH differ from installation to installation, ITE is not guaranteed compatible with all implementations. The following servers support ITE as determined in connectivity tests:

- SUSE 9.1
- SUSE 10.1
- Slackware 6.0.9
- FreeBSD 7.1
- CentOS v5.3
- Tectia 6.0.9.24

ITE supports the SSH connection settings described in this table:

Supported SSH Connection Settings

Setting	Description
SSH Version	Version2
SSH Algorithms	Diffie-Hellman group exchange sha1 SSH-RSA AES128-CBC HMAC-SHA1

Supported SSH Connection Settings (continued)

Setting	Description
Compression Algorithm	None
Authentication	Password
Connection Protocol	Not implemented

If you find incompatibilities between ITE SSH support and your host, contact Intermec Product Support and your Intermec sales representative to determine the best solution.

The SSH server provides all the services to connect clients to the host and control the TCP/IP ports. All a SSH server application does is position the cursor and read standard input (stdin). You can use the following procedure if you have already built a TCP/IP server application.

To convert a TCP/IP server application to a SSH server

1. Remove all multiprocessing/spawn code and all TCP/IP send() calls that echo the data.
2. Replace your TCP/IP recv() calls with the following:

   ```
   while((char ret = getc()) strncat(string, &ret, 1);
   ```

3. Replace all send calls that paint the screen with equivalent `putc()` or `puts()` calls.
4. Set PasswordAuthentication to Yes.
5. Set UsePAM to No.

Locking Down SSH Applications

Preventing a user from getting to the command prompt is required in many instances. A telnet server can accomplish this by bringing itself up during startup (as part of the standard services). SSH, as a server, is already started and logging into it as a shell brings up the command prompt.

On a Linux system, you can prevent this by creating a login script that executes your host application and then posts "exit" as its last command. Specifically, in the user account .pro file, append the following lines:

```
trap 2
./ pgmName
exit
```

About RTC over TCP

This is a protocol enhancement that along with a Session Persistence Server (SPS) ensures connection persistence in a roaming mobile environment. RTC over TCP only works when the specified host is an SPS. The actual end-host connection is made by the SPS based on configuration settings.

RTC over TCP and the SPS support IBM 3270, 5250, and VT/ANSI data streams. For more information on how session persistence is achieved and system requirements for using an SPS, see Appendix C, **"Configuring and Managing the Session Persistence Server."**

Unit # should be set to the default of 127 for non-Native data stream emulations.

About the KeyAlive Function

A terminal connection to an IBM host can be kept alive when user data is not being received by the host. Enabling the KeyAlive feature will cause a keypress, usually a function key, to be sent to the host every so often as if it was pressed by the user.

The KeyAlive function is disabled by default.

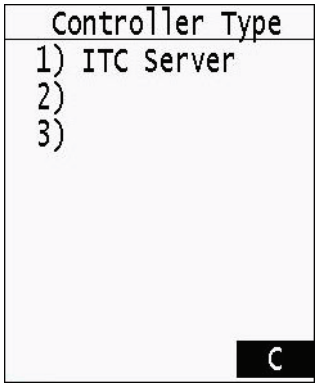
To set the KeyAlive Timer

1. Enter the desired number of minutes between keypresses.
2. Press **Enter**.

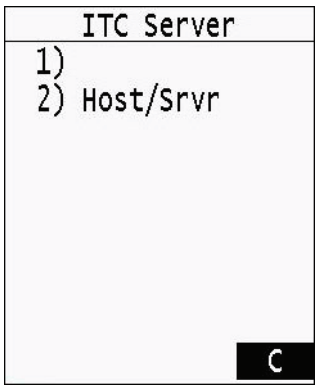
Valid Timer values are between 0 and 120 minutes. A value of 0 disables both the Timer and the KeyAlive feature. The Timer value is saved in the te_settings.ini file. When the value of the Timer is changed, any connected session will be disconnected and then reconnected as soon as the menus are exited.

Configuring for UDP Plus

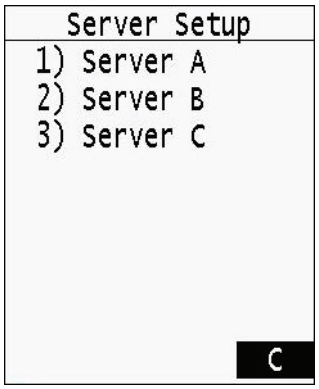
1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. In the Set-up Parms screen, tap **Communication** or press **1**. The Controller Type screen appears.



3. Tap **ITC Server** or press **1**. The ITC Server screen appears.



4 Tap **Host/Srvr** or press **2**. The Server Setup screen appears.

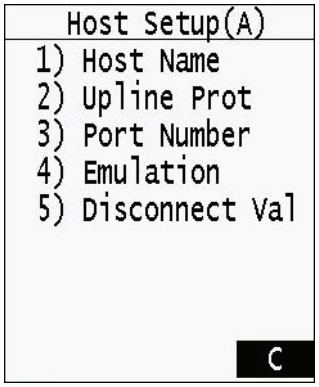


5 Tap a server name or press the corresponding number key to choose a server, and enter the server IP address.

Note: The Server A IP address is read from the TE_Settings.ini file (if one is saved) or the ITE application on the computer. When an IP address is entered, it is written to the computer copy of the ITE application for the next boot.

If using the Server B or Server C option as a fallback Intermec Application Server, enter the server IP address or DNS name. The boot sequence continues to try Server A, B, and C in that order by filling the firmware controller slot with the IP values entered for each server.

6 Press **Enter**. The Host Setup screen for that server appears.



7 Tap an option to select it, change settings as needed, and press **Enter**. When you are done with all changes, press **Enter**. The Server Setup screen appears.

Host Setup Options

Option	Description
Host Name	The host name can be 64 or fewer characters in length, with spaces or punctuation where needed. Note that the ITE application performs an auto-enter when the 64th character is entered. It is case-sensitive and must match a host name in the list of available hosts defined on the Intermec Application Server, or remain blank. The name can also be the IP address of the host to which you want to connect. Enter the IP address as four decimal numbers separated by periods. If a computer was linked with a host name on the Intermec Application Server, or a default host was configured on this Intermec Application Server, you do not need to enter a host name on this screen. If the following conditions are met, the computer shows a list of available hosts. You can then select the host from the list. • The Intermec Application Server contains multiple hosts. • The computer is not linked with a host name on the Intermec Application Server. • The host name is blank.
Upline Prot	Upline protocol for this host. When enabled, upline protocol options behave as follows: • **Telnet**: Forces the Intermec Application Server to create a Telnet connection to the host. • **SNA:** Forces the Intermec Application Server to create an SNA connection to the host.
Port Number	This option overrides the port number set for the upline if you have entered a host name and selected Telnet as your upline protocol. Default port number is 23. The maximum port number is 65535.
Emulation	Specifies the host computer type. Default is VT/ANSI. You can also set the computer type s described in **"Configuring Protocol Options" on page 43.**
Disconnect Val	If ITE cannot be connected to the ITC Server, this value is the number of ten-second intervals that the application waits until it tries a secondary controller. Range is 0 to 65525. If only a primary controller is defined, this value is ignored.

Using the Out of Range Monitor

You can use the Out of Range Monitor to alert users when the computer is trying to send data but is out of range of an access point. When this happens, the computer beeps three times and ITE shows this message:

To clear the message, the operator needs to move the computer closer to an access point. When the computer can connect to the access point, the last active ITE screen appears and ITE sends the data to the host.

Note: While this message is onscreen, the computer scanner is disabled. ITE ignores all keypresses except for the Menu button. Although you can view the ITE menus while out of range, when you exit the menus this message appears again if the computer is still out of range.

The Out of Range Monitor is disabled by default. Follow the next steps to enable the Out of Range Monitor.

To enable the Out of Range Monitor

1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. In the Set-up Parms screen, tap **More** or press **7**.
3. Tap **OOR Monitor** or press **6** to enable the Out of Range Monitor. When the monitor is enabled, the number 6 is highlighted.

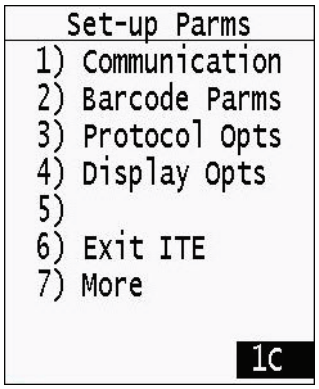
Configuring Bar Code Scanning Options

Follow this procedure to configure bar code scanning options in ITE.

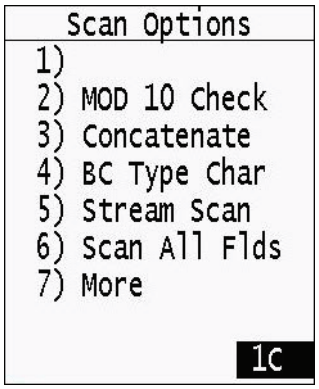
Note: To configure bar code scanning options as described in this procedure, be sure you enable ParmsBySession as described in Step 5. Otherwise, ITE uses bar code scanning options as set by the Intermec Settings application on the computer.

To configure bar code scanning options

1 Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**



2 Tap **Barcode Parms** or press **2** on the computer keypad. The Scan Options screen appears.



From this point, if you want to configure bar code symbology options such as enabling or disabling specific symbologies, or setting bar code lengths, continue with **"Configuring Bar Code Symbology Options" on page 39.**

3 Choose bar code scanning options by tapping the option onscreen or by pressing the corresponding number on the keypad. Tap **More** to see additional settings. When an option is enabled, its number is highlighted.

For more information on bar code scanning options, see the next section, "About Bar Code Scanning Options."

4 Press **Enter** twice to return to the Set-up Parms screen.

About Bar Code Scanning Options

This section describes the bar code scanning options you can enable, set, or change.

MOD 10 Check

Enable **MOD 10 Check** to add a check digit to the end of the bar code after a good read for transmission to the host. The host can then validate the transmitted data using the check. This feature is not needed with modem transmission protocols.

The bar code number is divided by 10, until the number (or modulus) is less than 10. If the modulus subtracted from 10 (remainder) is equal to zero, then the bar code number is valid.

Concatenate

Tap **Concatenate** to add each bar code read to the end of the previous bar code read. This continues until the computer meets a condition forcing transmission to the host.

When this option is not enabled, each bar code read is placed at the beginning of the current input field. After a bar code is placed in any field, any subsequent read replaces the first read.

BC Type Char

Tap **BC Type Char** to add a character associated with the bar code type to the beginning of the scanned bar code.

Stream Scan

Tap **Stream Scan** to enable overflow information. If the scanned bar code is too long for the input field, overflow information appears in the next field and continues until the entire bar code is entered. If Stream Scan is not enabled, overflow information is dropped.

Scan All Flds

Tap **Scan All Flds** to enable the scanner when the cursor is in an input field. When Scan All Flds is not enabled, the computer must enable the scanner for each input field requiring scanned data.

Scan PreChar and Scan PostChar

Tap **Scan PreChar** or **Scan PostChar** to specify a hex value for a character to be sent before or after the scanned data string. Range is 00 to FF. To send no additional characters, set these values to 20h.

ParmsBySession

Tap **ParmsBySession** to enable ITE configuration of bar code symbology options. ParmsBySession is disabled by default. You need to enable ParmsBySession or all changes you make to bar code symbology settings are ignored. When ParmsBySession is enabled, all symbology options you configure using this procedure are enabled on a per-session basis.

Note: ParmsBySession does not work with Bluetooth scanners. You need to use Wedge Mode for these scanners.

Use Wedge Mode

Tap **Use Wedge Mode** to use the bar code scanner and symbology settings as configured by the Intermec Settings application on the computer, including symbology options and grid data filtering and editing.

When Wedge Mode is enabled, all scanned data enters the ITE application from the system Virtual Wedge per the Virtual Wedge settings, as if the scanned bar code characters were typed into the keyboard.

Scanner data will not be inhibited when in a non-scannable field in 3270 or 5250.

Data is imported one keystroke at a time, so Wedge mode may seem slower than ParmsBySession.

Any option that requires ITE to know which symbology has been decoded does not work in Wedge mode.

When Wedge mode is enabled, none of the ITE menu options for scanning will function: Auto Tab Scan, Aut Entr Scn, BRT Auto Enter, any of the Auto Enter functions, Scan PreChar, Scan PostChar, symbology enable, disable, min-max or fixed lengths, drop leading, or trailing characters.

No ScanAhead

Tap **No ScanAhead** to prevent SF51 Cordless Scanners from scanning ahead until the host sends a scanner enable command. No ScanAhead is disabled by default.

Scan LengthErr

To enable an error message when scanned data will not fit into a 5250 scannable field, tap **More** and then tap **Scan LengthErr**. When Scan LengthErr is enabled, scans that are too long cause an error message box to appear at the top left of the ITE window, followed by three beeps.

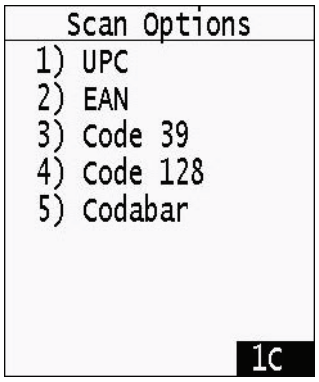
To dismiss the error, the operator can scan again, press a key or tap the display outside of the message window. Receiving more data from the host also dismisses the message.

The field length versus scan data length check is made against the current field regardless of Scan All Flds, Stream Scan, Concatenate, Auto Tab Scan, and Scan AutoEnter settings. The scanner data length includes any pre- or postambles.

This is only for scanner API data. Keyboard data and/or scan data that is Wedged will not cause this error. If Encoded is enabled, causes scanner data to behave as key presses instead. Enabling Auto-Encoded also causes scanner data to behave as key presses provided the scanner data contains any $', '+', '%' or '/' characters.

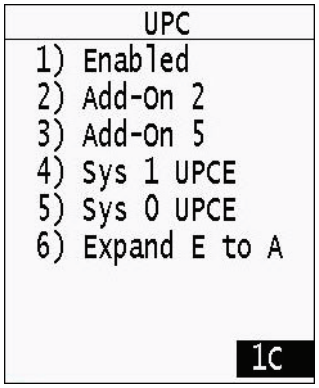
Configuring Bar Code Symbology Options

1 From the Scan Options screen, press **Enter**. This screen appears:



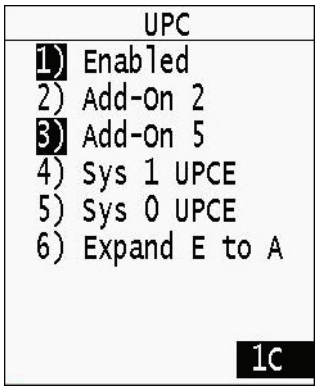
From this screen, you can configure symbology-specific options for the bar code types shown. For more bar code types, press **Enter** to see a second screen.

2 Tap the name of the bar code or press the corresponding number on the computer keypad. The first options screen for the bar code appears:



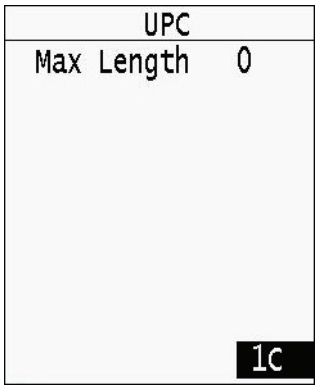
This example shows the options for the UPC symbology.

3 Tap an option to enable it, or press the corresponding number on the computer keypad. When an option is enabled, its number is highlighted as shown in this example:



In this example, UPC and its Add-On 5 option are enabled.

4 Press **Enter**. This screen appears:

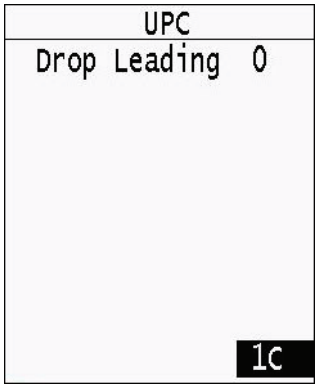


5 Enter the maximum length (range is 0 to 99) for the bar code. To delete a number, press the Backspace key. When you are done, press **Enter**.

For more information, see **"Setting Bar Code Lengths" on page 41.**

6 Repeat Step 5 to enter the minimum length or up to four fixed lengths (two fixed lengths for Interleaved 2 of 5) for the bar code symbology. If you specify fixed lengths, minimum and maximum length settings are ignored.

When you are done, press **Enter**. This screen appears:



7 Enter the number of leading characters to drop (range is 0 to 15), and then press **Enter**.

For more information, see **"About EAN/UPC Drop Leading and Drop Trailing Values" on page 41.**

8 Enter the number of trailing characters to drop (range is 0 to 15), and then press **Enter**. The Scan Options screen appears.

Note: ITE processes EAN 8 and UPC E bar codes in the same manner. The type character for EAN 8 with Add-On 2 or Add-On 5 decodes as UPC E with Add-On 2 or Add-On 5 respectively. The bar code type character also indicates UPC E with Add-On 2 or Add-On 5. Consequently, the drop leading and trailing UPC options are then used when an EAN 8 with Add-On 2 or Add-On 5 is decoded.

Note: The Encoded and Auto-Encoded features always delete invalid encoded pairs from the bar code data, including the preamble and postamble characters added under Intermec Settings Data Collection or Scan Prechar or Postchar.

When a bar code is scanned while Encoded Save is disabled (default), any of these characters $ + % / will be ignored as well as the following character if the following character is not in the table of encoded pairs. This is the standard behavior.

If Encoded Save is enabled, however, such invalid pairs of encoded characters will be included and passed on as if valid.

Setting Bar Code Lengths

You can specify the maximum and minimum length for specific bar code symbologies. Setting the length of bar codes helps the computer determine if a scanned bar code is valid and improves response time. The length options must be set for each enabled bar code.

Fixed-length entries override the maximum and minimum length entries (minimum and maximum are used for chosen codes). If fixed lengths are not needed for the enabled bar code, enter zero (0).

These rules apply to specific symbologies:

- Codabar, Str 2of5, Int 2of5, and CI 2of5 bar code symbologies set the length, if fixed-length 1 is non-zero, to three fixed-length entries equal to the first three fixed-lengths (fourth fixed-length is ignored). Otherwise, the length is set to greater than or equal to the minimum length.
- Code 39, Code 128, Code 93, and Plessey set the length to any length greater than or equal to the minimum length.
- UPC/EAN and Code 11 lengths are not used – ANY is allowed.
- Codabar options will not decode less than two data characters (four characters including Start and Stop).
- If both CI 2of5 and Str 2of5 are enabled, CI 2of5 options override Str 2 of 5 options.
- EAN Add-on settings override UPC add-on settings, if both UPC and EAN options are enabled.
- If "Sys 1 UPCE" or "Sys 0 UPCE" is selected, then both UPC E number system 0 and 1 are enabled.
- Code 11 does not support "No check digits." Select either 1 check digit (Chk Dig 1) or 2 check digits (Chk Dig 2) according to your bar codes. If neither check digit option is selected, then 2 check digits are used by default.

About EAN/UPC Drop Leading and Drop Trailing Values

Drop Leading and Drop Trailing values for UPC and EAN symbologies alter the bar code type and length.

The Drop Leading value is applied first. If this value changes the bar code length, then the displayable bar code type changes. The Drop Trailing value is applied based on the bar code type and new length. As the length changes due to dropped lead characters, the behavior of Drop Trailing changes based on the new bar code type and appearance.

Drop Trailing for UPC and EAN bar codes is designed to drop from the main bar code, not from the add-ons.

The next example demonstrates how Drop Leading and Drop Trailing values affect ITE bar code scanning:

1. Start with a UPC-E decode with Add-on 5.
2. As shown in the following "Bar Code Type vs. Format" table, Bar Code Type equals UPC E TYPE and length equals 13.
3. A Drop Lead of 3 makes the bar code length equal to 10. Now the bar code looks like UPC-E with add-on2, so any Drop Trail value drops characters to the left of the ending 2 add-on characters.

Note: A Drop Lead and Drop Trail value of 1,1 is not recommended with UPC or EAN symbologies. After the Drop Lead of 1, the bar code type and length combination may not be recognized as a valid UPC or EAN format.

If a bar code type and length translation results in an invalid combination, then the bar code type and length from before translation is retained.

Drop Leading and Drop Trailing operations work together as follows:

1. Translate Bar Code Type into Displayable Bar Code Type.
2. Apply the Drop Leading value based on the Translated Bar Code type.
3. Re-translate Bar Code Type with new length into Displayable Bar Code Type.
4. Apply the Drop Trailing value before the add-on based on the Translated Bar Code Type Add-On characters.
5. Re-translate Bar Code Type with new length into Displayable Bar Code Type.
6. Return Translated Bar Code Type and bar code without the dropped characters and with the new length.

Bar Code Type vs. Format

Bar Code Type	Length	Displayable Bar Code Type	Bar Code Format
UPC E	8	0	EAN Short
EAN 8	8	1	EAN Short
UPC	12	2	UPC Long
EAN	13	3	EAN Long
UPC E	10	4	UPC Short Add-On 2
EAN 8	10	5	EAN Short Add-On 2
UPC	14	6	UPC Long Add-On 2
EAN	15	7	EAN Long Add-On 2

Bar Code Type vs. Format (continued)

Bar Code Type	Length	Displayable Bar Code Type	Bar Code Format
UPC E	13	8	UPC Short
EAN 8	13	9	EAN Short Add-On 5
UPC	17	:	UPC Long Add-On 5
EAN	18	;	EAN Long Add-On 5

Raw Bar Code Type Values

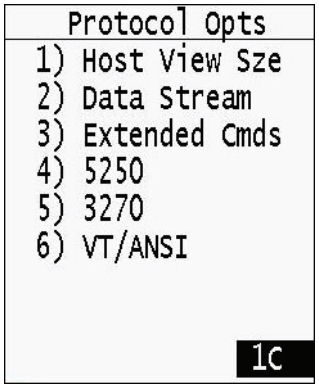
Raw Bar Code Type	Raw Value
UPC	0x10 (no add-ons)
EAN TYPE	0x11 (no add-ons)
UPC EAN	0x12 (no add-ons)
UPC E	0x13 (no add-ons)
EAN 8	0x14 (Add-On 2)

Configuring Protocol Options

This section explains how to set the type of terminal emulation supported by the host computer, and how to set additional commands and command sets.

To configure protocol options

1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. Tap **Protocol Opts** or press **3** on the computer keypad. The Protocol Opts screen appears.



Tap an option or press the corresponding number on the computer keypad to choose settings for that option:

- To change the host view size, tap **Host View Sze** or press **1**. For more information, see the next section, "Setting the Host View Size."
- To change data stream settings, tap **Data Stream** or press **2**. For more information, see **"Setting the Data Stream" on page 45.**
- To enable extended commands, tap **Extended Cmds** or press **3**. For more information, see **"Enabling Extended Commands" on page 46.**

- To set options for 5250 emulation, tap **5250** or press **4**. For more information, see **"Choosing 5250 Options" on page 47.**
- To set options for 3270 emulation, tap **3270** or press **5**. For more information, see **"Choosing 3270 Options" on page 50.**
- To set options for VT/ANSI emulation, tap **VT/ANSI** or press **6**. For more information, see **"Choosing VT/ANSI Options" on page 52.**

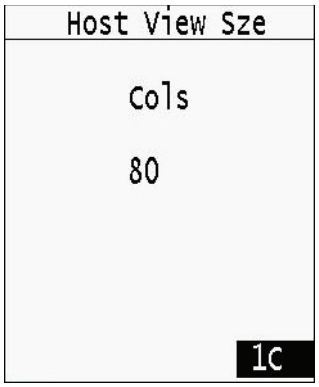
Setting the Host View Size

This option sets the format of display information sent from the host. For 3270 and VT/ANSI emulation, the display viewing size equals 1920 (the number of rows times the number of columns). For 5250 emulation, the viewing size equals 2000 because of the additional row for error messages

Note: The host view size can only be set for Host A. If the host view size in Host A is not supported by the host defined in B or C, ITE can lock up. This happens on all computer platforms.

To set the host view size

1. From the main Protocol Opts screen, tap **Host View Sze** or press **1**. The Host View Sze screen appears.



   The default settings are as follows.

   - VT/ANSI: 80 columns by 24 rows (equals 1920)
   - 3270: depends on what the original setting was before you enabled 3270 Terminal Emulation.
   - 5250: 80 columns by 24 rows (25 with error messages)

   Total characters must equal 1920 (except 5250 emulation with error messages).

2. Enter the host view size. Valid ranges are:
   - 3270: 1 to 80
   - 5250: 80 or 132
   - VT/ANSI: 80
3. Press **Enter.** The Protocol Opts screen appears.

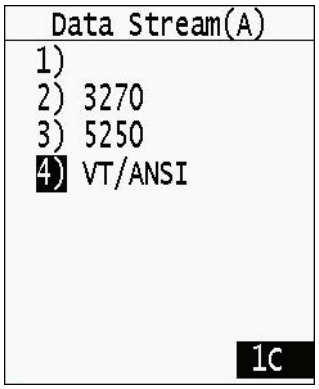
Setting the Data Stream

This option sets the type of host computer.

Note: You can also set the emulation type through the **ITC Server** or **Direct Connect** options. For more information, see **"Changing Communication Settings" on page 25.**

To set the data stream

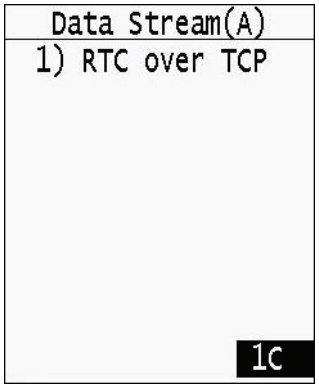
1 From the main Protocol Opts screen, tap **Data Stream**. The Data Stream screen appears.



In this sample screen, VT/ANSI is selected.

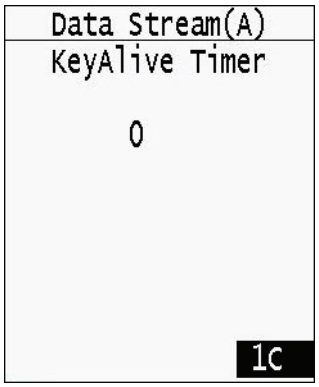
2 Tap the type of host computer to select it, or press the corresponding number. Your choice is highlighted.

3 Press **Enter**. This screen appears:



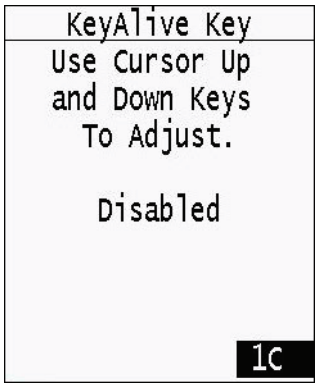
4 To enable RTC over TCP, tap the option onscreen or press **1**. Otherwise, continue with the next step.

5 Press **Enter**. This screen appears:



6 Set the KeyAlive value. Valid range is 0 to 120 (minutes). For more information, see **"About the KeyAlive Function" on page 32.**

7 Press **Enter**. This screen appears:



8 Set the KeyAlive value as follows:

   a Scroll through the list of key values using the arrow keys. The Up arrow moves up one entry, the Down arrow moves down one entry, the Left arrow skips to the top of the list, and the Right arrow skips to the bottom of the list.

   b Select a key value from the list: Disabled, F1 - F24, Attn, Clear, Enter, FldExit, Home, Reset, Roll Down, Roll Up, Help, Print, Sysreq.

9 Press **Enter**. The Protocol Opts screen appears.

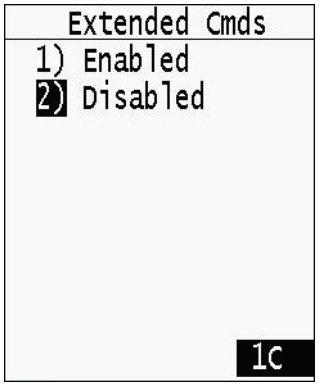
Enabling Extended Commands

Extended commands allow the host computer to change or use RS-232 communications, set bar code options, change display screen and font size, configure a connected RFID reader, or set error tone features.

By default, extended commands are disabled. For more information about extended commands, see the ***Intermec Terminal Emulator (ITE) Programmer's Reference Manual***.

To enable extended commands

1 From the main Protocol Opts screen, tap **Extended Cmds**. The Extended Cmds screen appears.



By default, extended commands are disabled.

2 To enable extended commands, tap **Enabled** or press **1**.

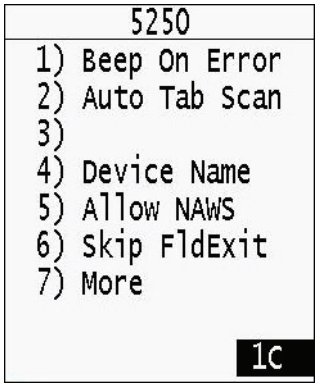
3 Press **Enter**. The Protocol Opts screen appears.

Choosing 5250 Options

If you are using 5250 emulation, follow this procedure to set available 5250 options for ITE.

To set 5250 emulation options

1 From the main Protocol Opts screen, tap **5250** or press **4**. The 5250 screen appears.



2 Choose 5250 options by tapping the option onscreen or by pressing the corresponding number on the keypad. Tap **More** to see additional settings. When an option is enabled, its number is highlighted.

For more information on bar code scanning options, see the next section, "About 5250 Options."

3 Press **Enter**. The Protocol Opts screen appears.

About 5250 Options

This section describes configurable settings for 5250 emulation.

Beep On Error

Causes the computer to beep when an error condition occurs without locking up the keypad. Disabled by default.

Auto Tab Scan

Causes the cursor to automatically tab forward to the next input field after a good scan.

Device Name

Enter a device name from 1 to 30 characters long. Valid ranges and characters include uppercase and lowercase letters, numbers 0 to 9, wildcards, pound symbols (#), dollar signs ($), ampersands (@), and underscores (_).

Once a device name is generated, only the first ten characters of the name are transmitted back to the host.

Note: The first character of Device Name must be a letter. Wildcards are not valid first characters.

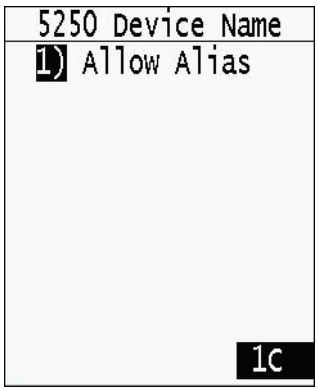
To create a unique device name string for this computer, use these wildcard characters to return computer-specific information:

Wild Card Characters for Device Name

Use	To Get
%I1, %I2, %I3, %I4	1st through 4th octet of IP address
%M1. %M2. %M3. %M4. %M5	1st through 5th part of MAC address
%S0, %S1, %S2, %S3, %S4, %S5, %S6, %S7, %S8, %S9, %SA	0 through 10th position of the device serial number.

Allow Alias

If you enter a device name, this screen appears:



When Allow Alias is enabled, if your current device name returns an error in use, then the computer attempts to append "$" (dollar sign) to the end of your device name to initiate a session to your host.

If this option is disabled, the device name is resent to the host for the host to send a FIN packet to the computer, causing the computer to reboot. This continues until the device name is no longer in use.

Allow NAWS

When Allow NAWS (Negotiate About Window Size) is enabled, the computer supports Telnet option 31 if prompted. When disabled, this option returns a "won't do" message.

Skip FldExit

Enable Skip FldExit to allow fields normally requiring a field exit to send field data when you press **Enter** on the computer. When Skip FldExit is disabled, these fields generate an error code of "0020" (field exit required) when **Enter** is pressed.

The legacy ITE application would send the entire field so a "7" entered into a 3-character blank-filled field would transmit as "7~~b~~~~b~~"(where "~~b~~" indicates a one-byte space), or a "12" would transmit as "12~~b~~". The ITE application strips the field fill characters so "7" transmits as a "7", "12" transmits as a "12," and so on.

Destructive BS

When Destructive BS is enabled, you can use the backspace key to delete previously-keyed data characters. When Destructive BS is disabled, the backspace key moves back one character, but does not delete that character.

Lock Error Msg

The ITE cursor modes ensure that the cursor location of the screen and its surrounding data is visible. The 5250 error message line is typically not visible because the error message line 24 is too far away from the cursor location. Enabling this option causes a 5250 Write Error Code command error message to be visible by placing the cursor on the error message line. When the RESET key is pressed, the cursor is restored to where it would have been if this option was not enabled (the location specified by a 5250 Insert Cursor command) and the cursor mode option then causes that area of the screen to be visible.

Disabling this option causes normal behavior for the 5250 Write Error Code command error message. The Write Error Code command error message is displayed on the error message line of the screen and the cursor is placed at the location specified by the host Insert Cursor command. The cursor mode renders the cursor area of the screen visible.

Use Color

When enabled, the ITE 5250 application emulates single byte IBM-5292-2 and double byte IBM-5555-C01 computers. Monochrome was used by and still emulates single byte IBM-5291-1 and double byte IBM-5555-B01 computers.

The 5250 Column Separator attribute is emulated using the ExtraLight font attribute which may not be noticeable on some computers.

3477-Fx Mode

Enabling this option tells the 5250 host that the computer is a 132-Column display. The host then sends screens formatted for 132 column displays.

DBCS mode ignores this option as the Telnet RFC for DBCS only supports an 80-column computer type.

When this option is enabled, 5250 Telnet negotiation of computer type reports "IBM-3477-FG" when the Use Color option is disabled and reports "IBM-3477-FC" when the Use Color option is enabled.

Scan AutoEnter

If this option is enabled and the field scanned into does not have the AutoEnter attribute, then the ITE application emulates the pressing of the Enter AID key.

Allow RTL

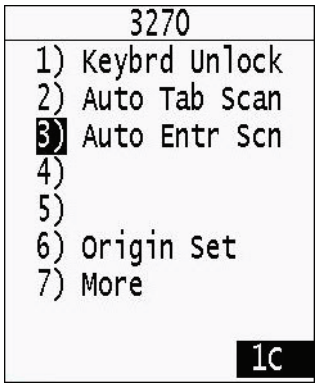
Enable Allow RTL to honor all 5250 commands that support right to left (Hebrew). When disabled, all 5250 commands for doing right to left are ignored. Default is enabled.

Choosing 3270 Options

If you are using 3270 emulation, follow this procedure to set 3270 options for ITE.

To set 3270 options

1. From the main Protocol Opts screen, tap **3270** or press **5**. The 3270 screen appears.



2. Choose 3270 options by tapping the option onscreen or by pressing the corresponding number on the keypad. Tap **More** to see additional settings. When an option is enabled, its number is highlighted.

   For more information on bar code scanning options, see the next section, "About 3270 Options."

3. Press **Enter**. The Protocol Opts screen appears.

About 3270 Options

This section describes configurable settings for 3270 emulation.

Keybrd Unlock

Enable this option to unlock the keyboard after pressing **PA1**, **PA2**, or **CLEAR**. Normally the keyboard remains locked until unlocked or until the computer is reset by the host after any of these keys are pressed. When using Token Ring on your host, pressing **Tab** also unlocks the keyboard.

Auto Tab Scan

When Auto Tab Scan is enabled, the cursor automatically tabs forward to the next input field after a good scan.

Auto Entr Scan

Enables the **Enter** function after a good scan.

Origin Set

When Origin Set is enabled, ITE resets the screen origin when an exclamation mark is found in the data stream.

Device Name

Enter a device name from 1 to 30 characters long. Valid ranges and characters include uppercase and lowercase letters, numbers 0 to 9, wildcards, pound symbols (#), dollar signs ($), ampersands (@), and underscores (_).

Once a device name is generated, only the first ten characters of the name are transmitted back to the host.

Note: The first character of **Device Name** must be a letter. Wildcards are not valid for first characters.

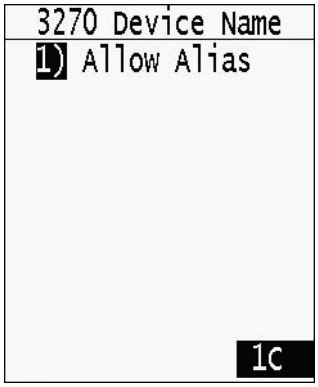
To configure a device name that includes computer-specific information, use wild card characters in the Device Name string as follows:

Wild Card Characters for Device Name

Use	To Get
%I1, %I2, %I3, %I4	1st through 4th octet of IP address
%M1. %M2. %M3. %M4. %M5	1st through 5th part of MAC address
%S0, %S1, %S2, %S3, %S4, %S5, %S6, %S7, %S8, %S9, %SA	0 through 10th position of serial number device.

Allow Alias

If you enter a device name, this screen appears:



When Allow Alias is enabled, if your current device name returns an error in use, then the computer attempts to append "$" (dollar sign) to the end of your device name to initiate a session to your host.

If this option is disabled, the device name is resent to the host for the host to send a FIN packet to the computer, causing the computer to reboot. This continues until the device name is no longer in use.

Allow NAWS

When Allow NAWS (Negotiate About Window Size) is enabled, the computer supports Telnet option 31 if prompted. When disabled, this option returns a "won't do" message.

BRT Auto Enter

When BRT Auto Enter is enabled, if the last field on a screen has the reverse video attribute set, the computer automatically sends the data for this screen back to the host with an "Enter AID" code when that field is exactly filled.

If BRT Auto Enter is disabled, the application waits for the user to press the AID key before sending data back to the host. Default is disabled.

Any Auto Enter

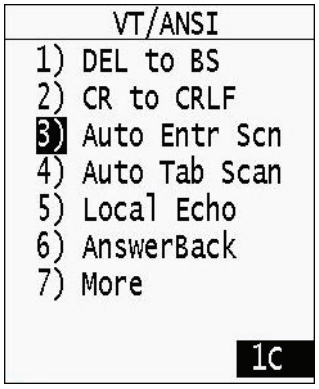
When Any Auto Enter is enabled, an automatic "enter" occurs when a reverse video attribute field is filled by keying or scanning data. Any extra scanned data is discarded. If disabled, the screen waits for the user to press the AID key prior to sending data back to the host. Default is disabled.

Choosing VT/ANSI Options

If you are using VT/ANSI emulation, follow the next procedure to set VT/ANSI options.

To set VT/ANSI options

1 From the main Protocol Opts screen, tap **VT/ANSI** or press **6**. The VT/ANSI screen appears.



2 Choose VT/ANSI options by tapping the option onscreen or by pressing the corresponding number on the keypad. Tap **More** to see additional settings. When an option is enabled, its number is highlighted.

For more information on bar code scanning options, see the next section, "About VT/ANSI Options."

3 Press **Enter**. The Protocol Opts screen appears.

About VT/ANSI Options

This section describes configurable settings for VT/ANSI emulation.

DEL to BS

When this option is enabled, pressing **CLEAR** deletes the character to the left of the cursor position, and moves the cursor back one space. When disabled (default), pressing **CLEAR** deletes the character at the cursor position.

CR to CRLF

When this option is enabled, pressing **Enter** performs both a carriage return and a line feed. When disabled (default), pressing **Enter** performs a carriage return only.

Auto Entr Scan

Auto Enter Scan automatically triggers the **Enter** function after a good scan. This option is enabled by default.

Auto Tab Scan

When Auto Tab Scan is enabled, the application automatically tabs to the next input field after a good scan. Default is disabled.

Local Echo

Enable Local Echo to display characters from computer memory (but not from host memory). Default is disabled.

AnswerBack

Enable AnswerBack to send a character string to the host in response to an inquiry (hexadecimal 05). The string can be 0 to 50 characters long. Default is the computer serial number. When ENQ is sent, only the first thirty characters of the name are transmitted back to the host.

When you enable AnswerBack, this screen appears:

Example AnswerBack Screen: *The default message is the computer serial number.*

Use the computer keypad or SIP to enter the character string. If you enter any of the following control characters, it is sent out. Note that control strings count as one character.

<ACK>	<BEL>	<BS>	<CAN>	<CR>	<DC1>	<DC2>	<DC3>
<DC4>	<DLE>	<EM>	<ENQ>	<EOT>	<ESC>	<ETB>	<ETC>
<FF>	<FS>	<GS>	<HT>	<LF>	<NAK>	<NUL>	<RS>
<SI>	<SO>	<SOH>	<STX>	<SUB>	<SYN>	<US>	<VT>

To configure a device name that includes computer-specific information, use wild card characters in the AnswerBack string as follows:

Wild Card Characters for Device Name

Use	To Get
%I1, %I2, %I3, %I4	1st through 4th octet of IP address
%M1. %M2. %M3. %M4. %M5	1st through 5th part of MAC address
%S0, %S1, %S2, %S3, %S4, %S5, %S6, %S7, %S8, %S9, %SA	0 through 10th position of serial number device.

Screen Lock

Enable Screen Lock to set and lock the screen to a specified size. Characters outside this screen size are ignored by the computer. Default is disabled.

DiscreteBells

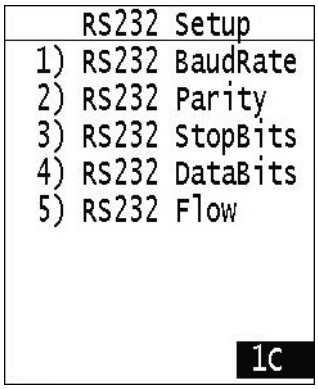
If enabled, each bell character is played in sequence. When disabled, the bell characters are concatenated into one. Default is disabled.

UserKey Locked

When UserKey Locked is enabled, the host ignores host commands defining the Function keys. Default is disabled.

RS232 Setup

Choose settings for RS-232 serial communications.



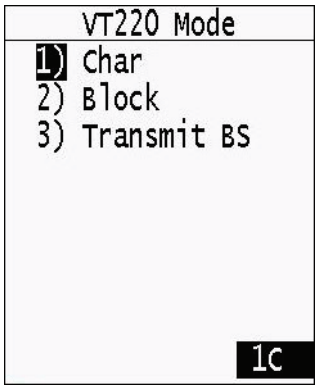
Tap a setting to see a list of options for that setting, and then tap an option in the list to select it. Press **Enter** to return to the RS232 Setup screen.

Options include:

- RS232 BaudRate: 9600 (default), 19200, 38400, 57600, or 115200
- RS232 Parity: Odd, Even, or None (default)
- RS232 StopBits: 1 (default) or 2 bits
- RS232 DataBits: 7- or 8-bit (default)
- RS232 Flow: None (default), DTR, or XON/XOFF

VT220 Mode

Choose settings for operation in VT220 mode.



By default, VT220 functions in Char mode. The computer sends each character as it is pressed.

- Tap **Block** to enable Line Edit mode. The computer sends a block of characters when you press a terminating key.

- Tap **Transmit BS** to send a backspace to the host when you press the Backspace key.

  When Transmit BS is disabled, the backspace key performs a destructive backspace to the printed data characters on the display.

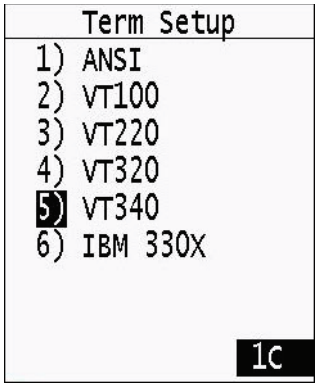
After you choose an option, press **Enter** to return to the Protocol Opts screen.

Lock Mode

You use the Mode key in the VT/ANSI data stream to toggle between Line Edit (block) mode and Character mode. Enable Lock Mode to disable the Mode key. By default, Lock Mode is disabled.

Term Setup

Sets the compliance level of the emulated computer.



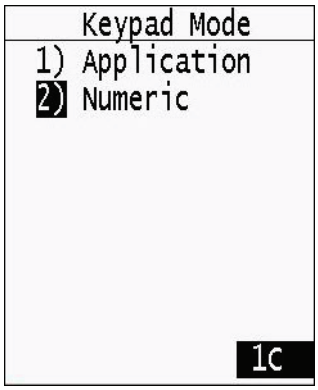
Default is VT340. Tap an option to select it, and then press **Enter** to return to the Protocol Opts screen.

Send XON

When Send XON is enabled, upon receiving an RIS from the host, the XON character is returned after compliance of this command.

Keypad Mode

Determines what is returned to the host when keys are pressed.

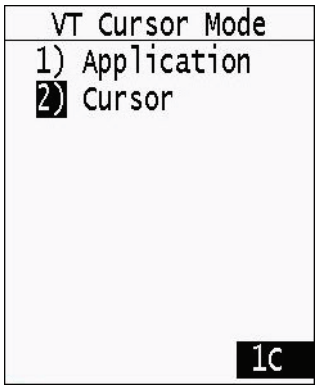


Default is **Numeric**. In this keypad mode, keypresses generate ANSI cursor control ESC sequences that correspond to what appears on the face of the keys.

Choose **Application** to generate application ESC sequences for the key code. For more information, see your VT documentation.

VT Cursor Mode

Determines what is returned to the host when cursor keys are pressed. When you choose VT Cursor Mode, this screen appears:

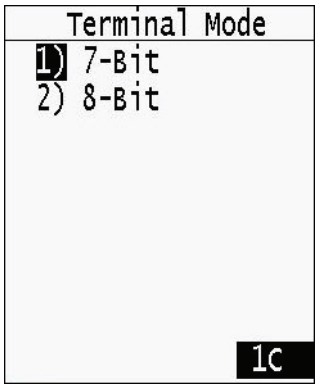


Default is **Cursor**. In this mode, the cursor generates ANSI cursor control ESC sequences that correspond to what appears on the face of the cursor key.

Choose Application to generate application ESC sequences for the key code. For more information, see your VT documentation.

Terminal Mode

(VT220/320 only) This option sets the mode VT-series computers use to exchange escape sequences, control commands, and status reports with an application. When you choose **Terminal Mode**, this screen appears:



Choose either **7-bit** (default) or **8-bit**.

Use PC Char Set

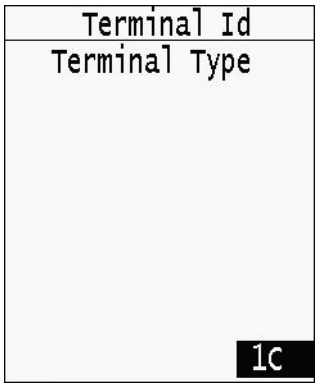
Enable **Use PC Char Set** to default the font character to the computer character set instead of a DEC computer character set.

Allow NAWS

When **Allow NAWS** (Negotiate About Window Size) is enabled, the computer supports Telnet option 31 if prompted. When disabled, this option returns a "won't do" message.

Terminal Id

Enables you to specify a character string to be sent to the host in response to IAC SB computer type SE. When you choose **Terminal Id**, this screen appears:



Enter the character string using the computer keypad or SIP. Valid length is 0 to 30 characters. Default is a null string. If set to null, then ANSI, VT100, VT220, VT320, or VT340 is returned as selected.

Auto Wrap

When **Auto Wrap** is enabled, graphic display characters received when the cursor is at the right margin appear on the next line. The screen scrolls up if the cursor is at the end of the scrolling region. If **Auto Wrap** is disabled, graphic characters received when the cursor is at the right margin replace previously displayed characters. This option is disabled by default.

Allow LineMode

When **Allow LineMode** is enabled, the computer prompts to negotiate to the default LineMode RFC 1184. When this option is disabled, the computer does not negotiate to LineMode RFC 1184.

Do Gold Key

When **Do Gold Key** is enabled, **F1** acts as the gold key on a VT/ANSI computer. This sends the F1 key value, which then "hides" the next key pressed, but puts its value into a buffer to send to the host (default). Note that the gold key action is only invoked when the computer is executing in block mode. When **Do Gold Key** is disabled, **F1** acts as a function key.

Do UTF8

Select this option to enable UTF-8 encoding as defined by RFC3629. If the character is between 0 and 0x7f, then nothing changes. If the character is between 0xc0 and 0xfd, then convert the character to a displayable character using the following formula where *x* is the first character in the string and *y* is the second character.

(x - 0xc0) ***2****6 + (y - 0x80)

If the character is between 0x8000-0xffff, then the UTF8 translation is done using the following formula. *0xef 0xbb 0xbf* is looked for saying that the following characters are encoded using ISO/IEC 10646 Universal Multiple-Octet Code Character Set with the UTF8 signature.

Then each character is comprised of three characters *x*, *y*, and *z* which are converted using the following formula:

(x-0xe0) * 0x1000 + (y-0x80) * 0x40 + (z-0x80)

If disabled (default), then characters are translated regularly as defined by the current gl, gr character sets selected.

Ignore DL ext

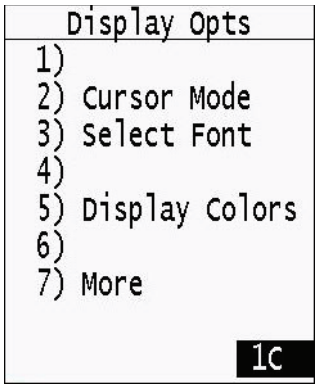
When this option is enabled, Data Logic terminal emulation escape characters are ignored. If **Ignore DL ext** is disabled, escape characters are displayed.

Changing Display Options

This section explains how to change settings for the display.

To change display settings

1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. Tap **Display Opts** or press **4**. The Display Opts screen appears.



3. Choose display options by tapping the option onscreen or by pressing the corresponding number on the keypad. Tap **More** to see additional settings. When an option is enabled, its number is highlighted.

   For more information on display options, see the next section, "About Display Options."

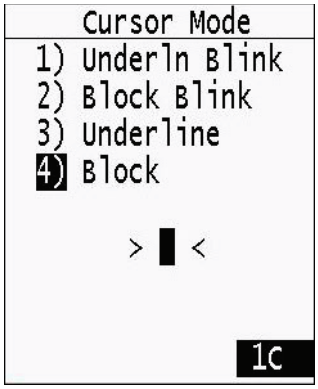
4. Press **Enter**. The Protocol Opts screen appears.

About Display Options

This section describes configurable options for the display.

Cursor Mode

Sets the cursor style.

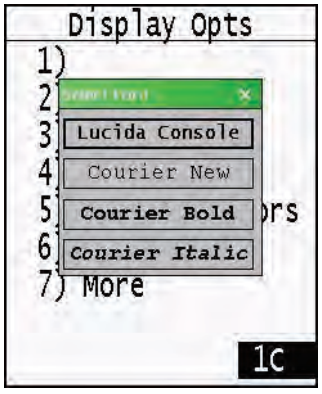


The default cursor mode is **Block** and the selected cursor type is shown between the arrow brackets.

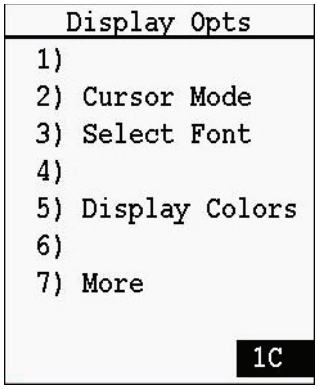
- Tap **Underln Blink** to use a blinking underline cursor.
- Tap **Block Blink** to use a blinking block cursor.
- Tap **Underline** to use a solid underline cursor.

Select Font

Sets the display font. When you choose **Select Font**, this screen appears:

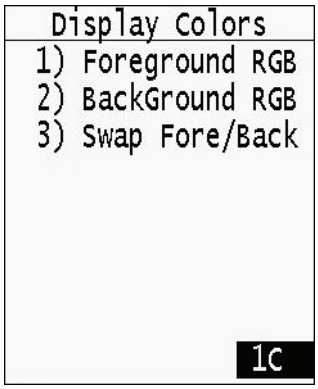


Tap another button to choose another display font. If you choose a different font, the screen is refreshed with the new font. This example shows Courier Bold:



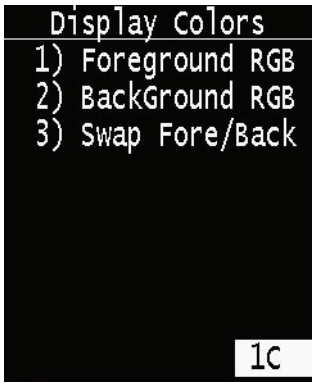
Display Colors

Sets the foreground (text) or the background colors of the display. When you choose Display Colors, this screen appears:



To set the display colors

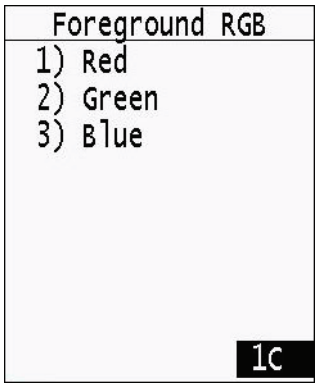
1 To swap the current foreground and background colors, tap **Swap Fore/Back** or press **3**. The colors are swapped.



To change the foreground (text) color, continue with Step 2.

To change the background color, continue with Step 3.

2 Tap **Foreground RGB** or press **1**. The Foreground RGB screen appears.



   a Tap **Red**, **Green** or **Blue** in the list and enter a value for that color. Range is 0 to 255. Default is 0 for all.

   b Press **Enter**. The Foreground RGB screen appears.

   c When you are done adjusting the colors, press **Enter**. The Display Colors screen appears.

   To change the background color, continue with the next step.

3 To change the background color, tap **BackGround RGB** or press **2**. The BackGround RGB screen appears.

   a Tap **Red**, **Green**, or **Blue** in the list and enter a value for that color. Range is 0 to 255. Default is 255 for all.

   b Press **Enter**. The BackGround RGB screen appears.

   c When you are done adjusting the colors, press **Enter**. The Display Colors screen appears.

Code Page

Sets the language and ASCII code page to use. When you choose Code Page, the Code Page screen appears:

First Code Page Screen

Second Code Page Screen: *Press 7 in the first screen to see this list.*

Tap a language in the list to select it. Language and code page choices include:

- **English** (code page 37)
- **Cyrillic** (displays text in Russian, code page 855)
- **Greek** (code page 1253)
- **Hebrew** (code page 862)
- **Central Europe** (displays text in Polish, code page 1250)
- **Latin 2** (displays text in Latin, code page 8859-2)

In the Code Page screen, tap **More** for these additional choices:

- **Turkish** (code page 1254)
- **Cyrillic Win** (displays text in Windows Russian, code page 1251)
- **Arabic** (code page 1256). When you choose this option, the following characters are not supported and display as boxes:
  - 0x8a (unicode character 0x679)
  - 0x8f (unicode character 0x688)
  - 0x9a (unicode character 0x691)
  - 0x9f (unicode character 0x6ba)
  - 0xaa (unicode character 0x6be)
  - 0xc0 (unicode character 0x6c1)

If you are running the 3270 or 5250 emulations which display characters in EBCDIC, additional requirements may be necessary to correctly display the fonts in your selected language. For more information, see **"Customizing 5250 EBCDIC to ASCII Translation" on page 129.**

Ignore Bold

When **Ignore Bold** is enabled, the bold attribute is ignored and text is displayed using the normal attribute. When disabled, the characters with the bold applied is displayed in bold. The default is disabled.

Ignore CnrTaps

When **Ignore CnrTaps** is enabled, double-taps to the screen are ignored, including double-taps in the upper right hand of the screen to access the ITE menus and double-taps in the upper left hand corner to bring up switch session dialog boxes.

By default, this option is disabled, and double-taps in both the left- and right-hand corners access the ITE menus or the session switching dialog boxes.

Menu Hotspot

When this option is enabled, ITE recognizes a numeric menu option (such as "90. Sign off") on the screen in the following format:

```
((<line begin> | <space(s)>) <digit(s)> `.' <space> <non-space>)
```

This sends the <numeric string> to the keypad followed by **Enter** as if those keys were pressed. On a double-click, if this is enabled but is not recognized, the computer sounds an error beep.

Func Hotspot

When this option is enabled, ITE recognizes function key descriptions (such as "F3=Exit", valid for F1 through F24) on the screen in the following format:

((<line begin> | <space(s)>) 'F' <digit(s)> '=' <non-space>)

This sends the Function key represented by <numeric string> to the keypad as if that key was pressed. On a double-click, if this is enabled but is not recognized, the computer sounds an error beep.

No Lockdown

By default, **No Lockdown** is disabled, and ITE functions as a locked-down application with no Windows system menu bars. When you enable **No Lockdown**, ITE switches to a normal Windows CE display with an accessible system taskbar. This option is not by-session but applies to all sessions.

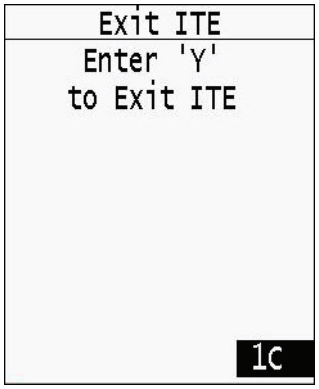
URL Hotspots

Enabling this option allows you to double-tap a displayed http://url address or file://address to open that location in the default web browser. Tap the exit button in the upper right corner to close the browser.

Exiting ITE

To exit ITE from the Set-up Parms screen

1 Tap **Exit ITE** or press **6**. This screen appears:



2 Press **Y** to exit ITE.

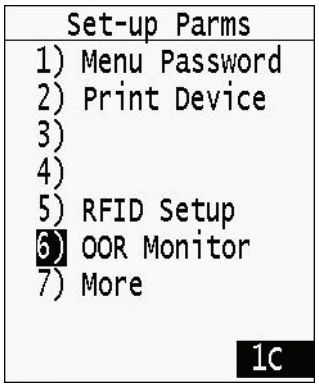
Enabling the Configuration Menu Password

By default, you do not need to enter a password to access the ITE menus. You can enable password protection to prevent unauthorized access to the menus.

To enable the configuration menu password

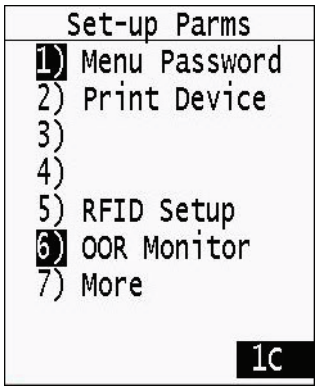
1 Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**

2 In the Set-up Parms screen, tap **More** or press **7**. This screen appears:



3 Tap **Menu Password** or press **1**. The Enter Password dialog box appears.

4 Type 3193693. When you enter the last character, the dialog box closes and the Menu Password number is highlighted, indicating that the password (3193693) is now required for access to the ITE menus.



Note: The menu password can also be set via a custom configuration. For help on creating a custom configuration file, see Chapter 4, **"Customizing Your Configuration."**

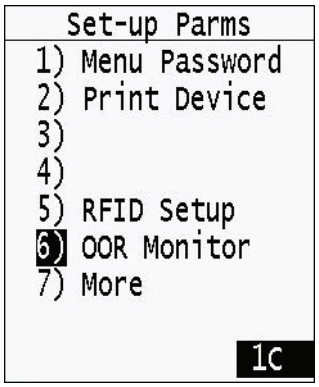
To disable the configuration menu password

- Tap **Menu Password** or press **1**. You do not need to enter the password to disable it.

Setting a Print Device

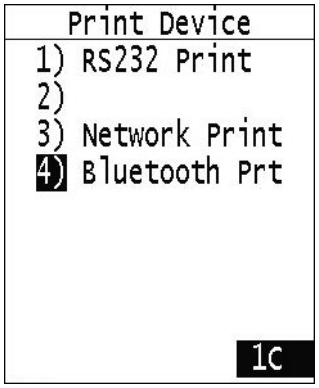
1 Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**

2 In the Set-up Parms screen, tap **More** or press **7**. This screen appears:



Note: On the CV30, this screen also includes Com Select.

3 Tap **Print Device** or press **2**. The Print Device screen appears.



Note: On the CK61, this screen also includes IrDA for option 2.

4 Choose a print driver:

- Tap **RS232 Print** or press **1** for the RS-232 print driver. This setting is the default for the CK61 and CV30.
- (CK61 only) Tap **IRDA Print** or press **2** to choose an IrDA printer connection.
- Tap **Network Print** or press **3** to choose a network printer, and follow the prompts to enter the network printer IP address and printer port.
- Tap **Bluetooth Prt** or press **4** to choose the current Bluetooth printer. This setting is the default for the CK3 and CN3 computers.

Note: ITE only supports Bluetooth devices connected to COM6.

Setting the COM Port (CV30 only)

If you are running ITE on the CV30 computer, you can select which COM port to use while doing extended commands #F, #G, or #P, or to direct output from the media copy command in the VT/ANSI data stream. For more information on the #F, #G, and #P extended commands, see the ***Intermec Terminal Emulator (ITE) Programmer's Reference Manual***.

To set the CV30 COM port

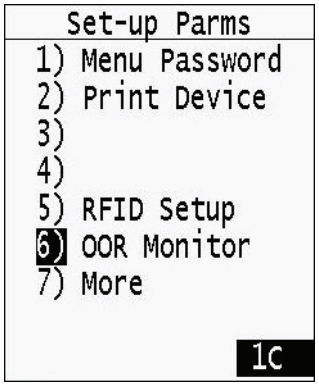
1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. In the Set-up Parms screen, tap **Com Select** or press **3**. The Com Select screen appears.
3. Tap **Com1** or press **1** to choose COM1, or tap **Com3** or press **2** to choose COM3.

Connecting to an RFID Reader

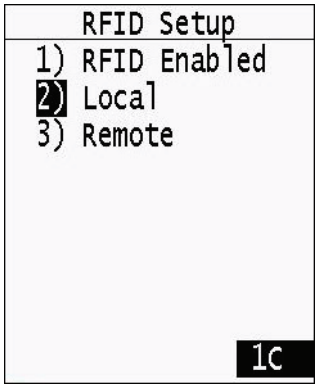
If your computer supports RFID, follow the next procedure to connect to and enable an RFID reader.

To connect to an RFID reader

1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. In the Set-up Parms screen, tap **More** or press **7**. This screen appears:



3. Tap **RFID Setup** or press **5**. The RFID Setup screen appears.



4 To search for an RFID reader to connect to, tap **RFID Enabled** or press **1**. ITE looks for a reader connected directly to the computer (Local), as opposed to a remote reader.

   To configure a remote reader, tap **Remote** or press **3**, and enter the IP address of the remote RFID reader.

Configuring the Computer Display

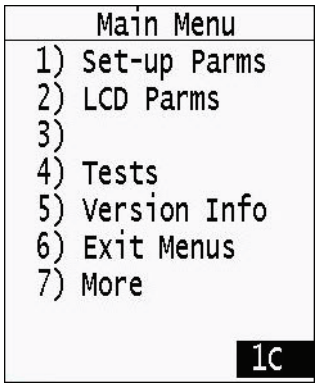
You can customize the way ITE is displayed on the computer screen, including screen size and mode, annunciator positions, menu settings and toolbar options, and other settings. Follow the next procedure to configure computer display settings.

To configure the computer display

1 When ITE is running, double-tap the upper right corner of the computer screen.

   Or, tap the Menu button [M] in the Toolbar and choose ITE Menus from the popup list.

   The Main Menu appears:

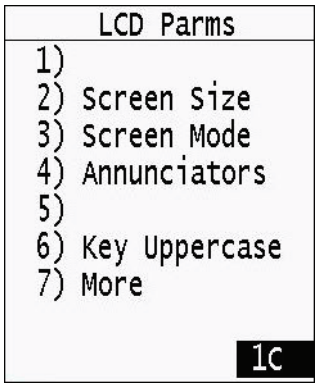


   You can also scan this bar code to access the Main Menu. Code 39 Full ASCII must be enabled on the computer (disabled by default).

   ITE configuration menus

   %TECFG

2 Tap **LCD Parms** or press **2**. The LCD Parms screen appears.



3 Choose computer display options by tapping the option onscreen or by pressing the corresponding number on the keypad. Tap **More** or press **7** to see additional settings. When an option is enabled, its number is highlighted.

For more information on bar code scanning options, see the next section, "About Computer Display Options."

4 After you configure options for the display, press **Enter**. The Main Menu appears.

About Computer Display Options

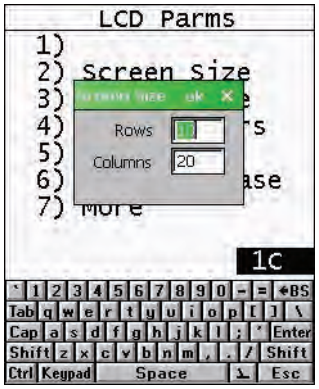
This section describes configurable options for the computer display.

Screen Size

This setting determines the number of lines and characters in each line.

To change the screen size

1 In the LCD Parms screen, tap **Screen Size** or press **2**. The Screen Size dialog box appears.



2 Enter values for the screen size:

- For the CK3, CK32 and CK61, range for rows is 8 to 21. Range for columns is 10 to 32.
- For the CV30, range for rows is 8 to 27. Range for columns is 16 to 132.

For all computers, the default screen size is 10 rows x 20 columns.

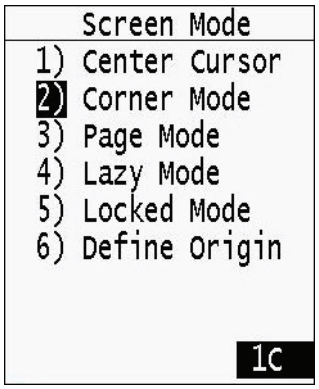
3 Tap **OK** or press **Enter** to close the dialog box.

Screen Mode

Screen Mode defines the cursor position and movement as you scroll through data in the display buffer, which stores data in a standard CRT format as sent from the host computer. Use **Screen Mode** options to optimize your view.

To configure Screen Mode

1 In the LCD Parms screen, tap **Screen Mode** or press **3**. The Screen Mode screen appears.



The default Screen Mode setting is Corner Mode.

2 Tap an option to select it or press the corresponding number key. Screen Mode options are as follows:

- Center Cursor

  In this mode, the cursor begins near the center of the display and attempts to remain there as you scroll through the data. Upon reaching an outside boundary of the full CRT screen, the display stops advancing while the cursor moves beyond the center of the screen. When the cursor reaches the boundary of the CRT screen, an error tone sounds, such as a "beep." The cursor does not wrap to the next line in the display.

- Corner Mode (default)

  Starts the display at the upper-left corner of the full CRT screen and keeps the cursor in the lower-right corner of the display. As you scroll, the cursor remains there as data advances in the scrolled direction (up, down, right, or left) until an outside boundary of the full CRT screen is reached. Then the screen stops moving in relation to the display and the cursor moves in the scrolled direction (the cursor no longer remains in the corner of the display). When the cursor reaches the CRT screen boundary it stops moving. The cursor does not wrap to the next line in the display. An error tone sounds if you try to move the cursor beyond the boundary.

  This option is recommended when your application uses only the upper-left corner of the full CRT screen.

- Page Mode

  Divides the full CRT screen into predefined “pages,” and starts the computer display on page 1. The cursor first appears in the upper right corner of the display. As you scroll, only the cursor moves (the data on the screen does not appear to move). When you scroll off the edge of the displayed page, the display snaps to the next (or previous) page. Upon reaching the boundary of the CRT screen, the cursor stops moving and an error tone sounds each time you attempt to move beyond the boundary.

  Some pages in **Page Mode** overlap each other (the same information is shown on both pages). This overlap occurs because the 24-row by 80-column CRT screen cannot be divided equally.

- Lazy Mode

  Starts the cursor in the upper left corner of the computer display. The cursor moves across the display in the scrolled direction. When the cursor goes beyond the edge of the display, the data begins to move in the opposite direction that the cursor is moving in and the cursor remains at the edge of the display. When you reach an outside boundary of the full CRT display, an error tone sounds each time you try to move beyond the boundary.

- Locked Mode

  In this mode the screen view is locked to the upper left-hand corner of the display. Any characters selected outside of the display window size are written to the screen but are not visible. The windowing keys do not move the visible window.

Note: In 5250 emulation, the err_row is mapped to the last row of the screen size selected.

- Define Origin

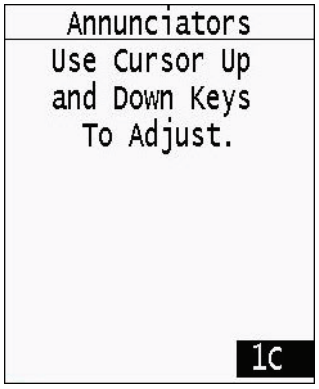
  Specify the "X,Y" origin of the computer display. Range for X is 0 to 79. Range for Y is 0 to 23. Default for both is 0.

Annunciators

You can change the location and shape of the annunciators on the screen. You can also select “Stealth Mode” which displays the annunciators only when you make a change and then hides it when you press a key.

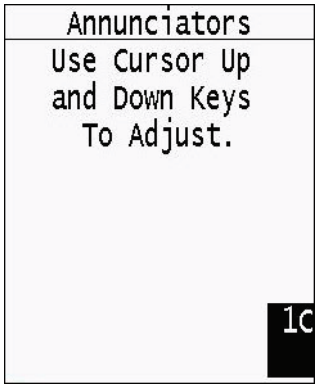
To change annunciator locations

1 In the LCD Parms screen, tap **Annunciators** or press **4**. The Annunciators screen appears.



The default annunciator shape and location is a line in the lower right corner.

2 Press the cursor up or cursor down keys to move the annunciator location. As you press the keys, the annunciator moves from corner to corner, first appearing as a line and then as a box. This example shows the annunciator as a box in the lower right corner of the screen:



To choose Stealth Mode, press the cursor up or cursor down keys until the annunciator is not visible on screen.

Key Uppercase

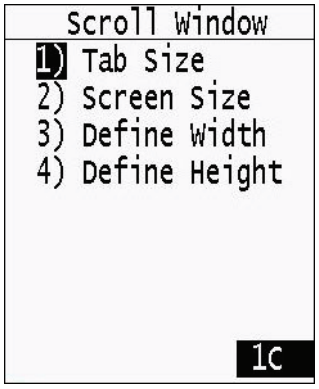
When Key Uppercase is enabled, the alphabetic keys (A through Z) are shown as uppercase characters regardless of the Shift or Caps Lock mode settings.

Scroll Window

Scroll Window settings define how far the cursor moves when you press the arrow keys.

To adjust Scroll Window settings

1 In the LCD Parms screen, tap **More** or press **7**, and then tap **Scroll Window** or press **1**. The Scroll Window screen appears.



The default setting is **Tab Size**. The window scrolls the current tab size.

2 Tap an option to select it:

- Tap **Screen Size** to set the window scrolling distance to the size of the screen.
- Tap **Define Width** and enter the width of the scrolling distance.
- Tap **Define Height** and enter the height of the scrolling distance.

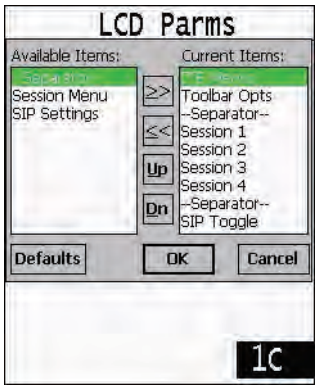
Menu Settings

Menu Settings determine the items that appear in the popup list when you tap the Menu button in the ITE Toolbar.

To configure Menu Settings

1 In the LCD Parms screen, tap **Menu Settings** or press **2**. The Input Password dialog box appears.

2 Enter the menu access password (default is `cr52401`) and tap **OK** or press **Enter**. This dialog box appears:



The current menu settings are listed on the right in the **Current Items** list. The available items that you can add to the current menu settings are listed on the left in the **Available Items** list.

3 Tap an item in a list to select it, then tap **>>** or **<<** to move that item.

Items are displayed in the same order they appear in the **Current Items** list. To rearrange the order the items are displayed in the list, tap an item to select it, then tap **Up** or **Dn** to move the item up or down in the list.

4 Tap **OK** to keep your changes, or tap **Cancel** to abandon your changes.

You can also tap **Defaults** to restore the defaults for the menu.

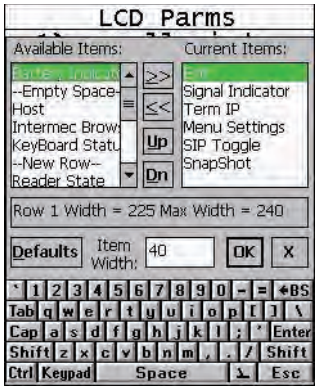
Toolbar Opts

Toolbar Opts settings determine the items that appear in the ITE Toolbar. For more information on these items, see the next section, "About Toolbar Items."

To configure Toolbar options

1 In the LCD Parms screen, tap **Toolbar Opts** or press **3**. The Input Password dialog box appears.

2 Enter the menu access password (default is `cr52401`) and tap **OK** or press **Enter**. This dialog box appears:



The current items in the Toolbar are listed in the **Current Items** list. Available items that you can add to the Toolbar are listed in the **Available Items** list.

The Row field lists the number of the row in the Toolbar (default is 1), the total width (in pixels) of the all the items in the Toolbar, and the maximum available width of the Toolbar (240 for CK3, CK32, and CK61, or 800 for CV30).

The **Item Width** field shows the width of the currently selected item in the Current Items list.

3 Tap an item in a list to select it, then tap **>>** or **<<** to move that item.

Toolbar items are displayed from left to right in the same order they appear in the **Current Items** list. To rearrange the order the items are displayed in the list, tap an item to select it, then tap **Up** or **Dn** to move the item in the list.

Note: If the toolbar exceeds the maximum width of your display, then the items in the toolbar that extend past the maximum width are not visible.

4 Tap **OK** to keep your changes, or tap **Cancel** to abandon your changes.

You can also tap **Defaults** to restore the Toolbar defaults.

About Toolbar Items

This section describes the items you can choose to display in the Toolbar as described in the previous section, "Toolbar Opts."

Battery Indicator

Shows the percentage of battery life remaining:

Color	Percentage of Available Battery Life
Green	Above 66%
Yellow	Between 33% and 66%
Red	Below 33%
White	Unknown

Empty Space

Set number of blank pixels. Use this to separate items in the Toolbar.

Exit

Tap this button to exit ITE.

Host

Displays the current session name if defined. If a session name is not defined then the current IP address of the host or DNS name for the host is displayed in the toolbar. To define a session name, see **"Configuring Sessions" on page 83.**

Note: When your computer is connected to the host for TCP/IP and when it is connected to the controller running UDP Plus, this option is displayed with white text in a blue background. When the computer is not connected, this appears in black text on a gray background.

Intermec Browser

Tap to run the Intermec Browser application.

KeyBoard Status

Indicates Shift key, CTRL key, ALT key, and Caps Lock status.

- If Shift is enabled, "SHF" appears.
- If CTRL is pressed, "CTL" appears.
- If ALT is pressed, "ALT" appears.
- If Caps Lock is enabled, "CAP" appears.

Menu Settings

Tap to access the configuration menus. For more information, see **"Menu Settings" on page 73.**

New Row

Adds another row to the Toolbar for additional icons. Items appearing after New Row in the Current Items list appear in the new row.

Reader State

Shows a status button for the associated RFID reader in the toolbar.

On the CV30 connected to the IF4 and IV7 readers, the button displays:

- "NO" if a socket connection was not made to the data collection engine, or if there is a communication error between the computer and the RFID reader. Tap the button to establish a connection to the reader.
- "RF" when a valid socket connection is made to the data collection engine. Tap the button to activate the reader.

For CK3, CK61, and CN3 computers with IP30 readers, the button displays:

- "NO" if a socket connection was not made to the data collection engine, or if there is a communication error between the computer and the RFID reader
- "RF" when a valid socket connection is made to the data collection engine.
- "SC" when the reader trigger state is set to scan.

Session 1, Session 2, Session 3, Session 4

Choose these items to reserve space on the toolbar to display the session name (if entered), or the IP address or DNS name of the host for that session. Tap the button to switch to that session. If no session name, IP address or DNS name is entered, then empty space is reserved on the toolbar.

Note: These options appear in white text on a black background when the current session is the foreground session and your computer is connected to:

- the host for TCP/IP.
- the controller running UDP Plus.
- the Session Persistence Server.

Connected background sessions appear in white text on a blue background. When the computer is not connected, these appear in black text on a white background.

Session Menu

Tap the button to choose a different session.

Note: This button does not function when the ITE configurations menus are open, or if UDP+ is the active transport layer (only one session is allowed in UDP+).

Signal Indicator

Shows the RSSI (Radio or Ready Signal Strength Indicator) which displays the RSSI frequency retrieved from the radio module. The indicator is updated every 5 seconds. The color scheme is set up as follows.

RSSI Color Descriptions

Color	Status of RSSI
Dark Green	100% Excellent
Light Green	80% Favorable
Yellow	60% Good

RSSI Color Descriptions (continued)

Color	Status of RSSI
Orange	40% Poor
Red	20% Bad

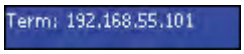
SIP Toggle

Tap to hide or display the SIP.

SnapShot

Tap to use the SnapShot feature. On supported platforms, this lets you use the imager to capture high-quality greyscale images. For more information, see **"Using the SnapShot Feature" on page 87.**

For information on using the imager, see the computer user's manual.



Term IP

Shows the IP address of the computer in the Toolbar. If the IP address is not known because DHCP has not assigned an address to the computer, then this reads "unknown".

Note: When your computer is connected to the host for TCP/IP, or when it is connected to a controller running UDP Plus, this field is displayed with white text in a blue background. When the computer is not connected, this appears in black text on a white background.

Time

Shows the current time in the Toolbar.

Voice

Tap to launch an installed voice application. For more information, see **"Using Voice over IP" on page 85.**

Testing Peripherals

After you make changes to keyboard options or bar code symbology settings, you can test the keyboard and scanner to verify that these peripherals function as you intended.

To test peripherals

1. When ITE is running, double-tap the upper right corner of the computer screen.

   Or, tap the Menu button

 in the Toolbar and choose ITE Menus from the popup list.

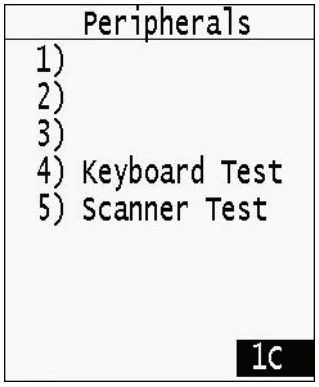
   You can also scan this bar code to access the Main Menu. Code 39 Full ASCII must be enabled on the computer (disabled by default).

   ITE configuration menus

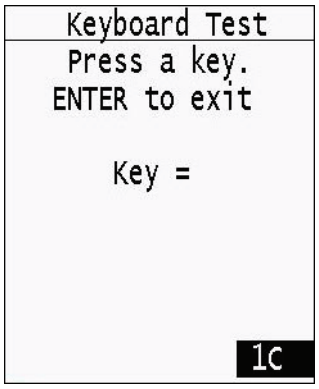
   %TECFG

2 In the Main Menu, tap **Tests** or press **4**. The Peripherals screen appears.

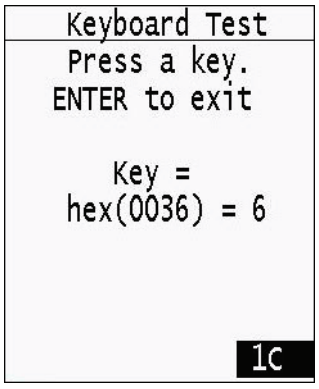
3 Tap **Peripherals** or press **1**. This screen appears:



4 To test the computer keyboard, tap **Keyboard Test**. The Keyboard Test screen appears.

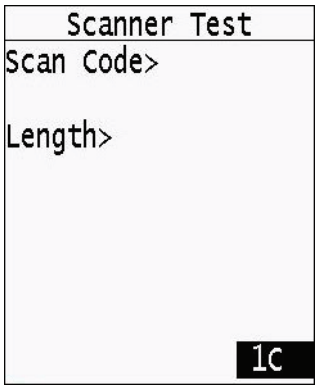


5 Press a key on the computer keypad or SIP. The hex value and character appear onscreen.

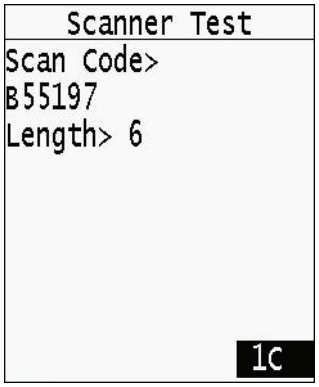


6 Repeat Step 5 for other keys you wish to test. When you are done testing the keyboard, press **Enter**.

7 In the Peripherals screen, tap **Scanner Test**. The Scanner Test screen appears.



8 Scan a known good bar code. The bar code data and length appear onscreen.



9 Repeat Step 8 to test other bar codes, or press **Enter** to end the scanner test.

Note: If you are running in wedge mode, then no data is displayed from the scanner like that of a keyboard data entry. All keystrokes cause the computer to emit a beep except **Enter**, which takes you back to the previous menu.

Viewing ITE Version Information

Follow the next procedure to view ITE version and date information. You may need this information if you are upgrading, or if you need to contact Intermec Product Support.

To view ITE version information

1 When ITE is running, double-tap the upper right corner of the computer screen.

Or, tap the Menu button [M] in the Toolbar and choose ITE Menus from the popup list.

You can also scan this bar code to access the Main Menu. Code 39 Full ASCII must be enabled on the computer (disabled by default).

ITE configuration menus

%TECFG

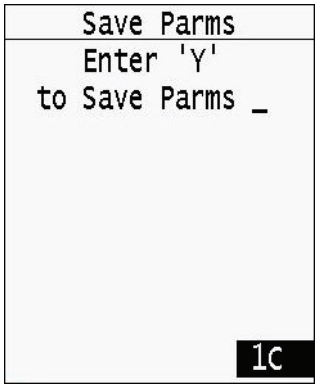
2 In the Main Menu, tap **Version Info** or press **5**. The Version Info screen appears, showing the ITE application file name, version, and date created.

Exiting the Configuration Menus

To exit the menus

1 From the Main Menu, tap **Exit Menus**. If you did not change any parameters, the ITE main screen appears.

If you changed parameters, the Save Parms screen appears.



2 To save your changes, press **Y**.

Or, to exit the menus without saving any changes, press any other key. If you do not save changes, any changes you made are effective while ITE is running, but are lost when the computer reboots.

Note: Some changes may cause the current session to your host to close and a new session to open.

Configuring Keyboard Options

You can configure these keyboard options for ITE:

- Enable or disable type-ahead, which stores keystrokes after the Input Inhibited annunciator appears, and saves them for the next input field.

- Set the type of SIP that appears when you use ITE.
- Enable the F13 to F24 function keys by pressing **Shift**.

To configure keyboard options

1. When ITE is running, double-tap the upper right corner of the computer screen.

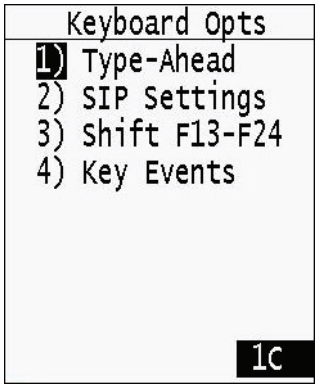
   Or, tap the Menu button [M] in the Toolbar and choose ITE Menus from the popup list.

   You can also scan this bar code to access the Main Menu. Code 39 Full ASCII must be enabled on the computer (disabled by default).

   ITE configuration menus

   %TECFG

2. In the Main Menu, tap **More**, and then tap **Keyboard Opts** or press **1**. The Keyboard Opts screen appears.

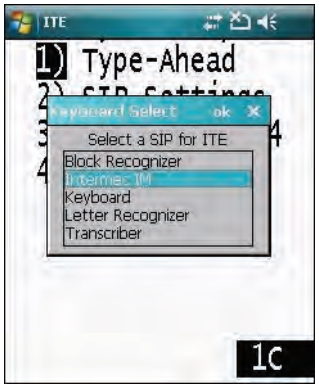


   Type-Ahead is enabled by default. When the computer cannot immediately send data to the host computer, ITE stores keystrokes after the Input Inhibited annunciator (5) appears on the status line, and then saves them for the next input field.

3. To disable Type-Ahead:
   - Tap **Type-Ahead** or press **1**.

To change SIP settings:

a Tap **SIP Settings**. The Keyboard Select dialog box appears.



b Tap a SIP keyboard type in the list to select it and then tap **OK**, or tap **X** to close the dialog box without choosing another SIP.

To enable function keys F13 through F24:

- Tap **Shift F13-F24**. When this is enabled, press keys F1 through F12 plus **Shift** to simulate pressing keys F13 through F24.

To enable key events (CV30 with enhanced keyboard driver only):

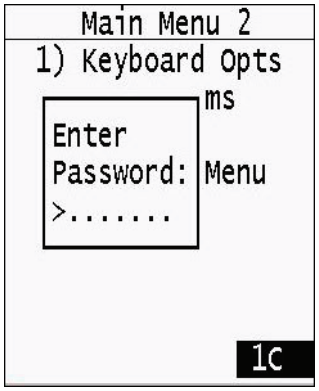
- Tap Key Events and choose from Alpha, shift, or CAPS.

Saving Configuration Changes to ITE

After you make changes to ITE configuration settings, save your changes. When saved, changes become the default settings for the computer.

To save changes

1 In the Main Menu, tap **More**, and then tap **Save Parms**. The Enter Password dialog box appears.



2 Enter the password (default is `cr52401`). When you enter the last password character, the dialog box closes and this screen appears:

Your changes are written to flash memory. When the changes are saved, the Main Menu 2 screen appears.

If you enter an incorrect password, the computer returns to the **Save Parms** screen without saving your changes.

Configuring Sessions

Note: This section is supported only by computers using a TCP/IP connection. Computers running UDP Plus do not allow multiple sessions.

You can define different host communication sessions, designate a "hot key" that switches quickly between sessions, and assign sessions customizable host names or friendly names.

To configure sessions

1 When ITE is running, double-tap the upper right corner of the computer screen.

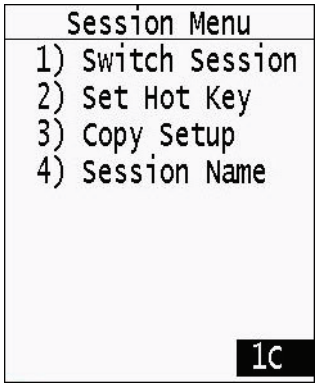
Or, tap the Menu button [M] in the Toolbar and choose ITE Menus from the popup list.

You can also scan this bar code to access the Main Menu. Code 39 Full ASCII must be enabled on the computer (disabled by default).

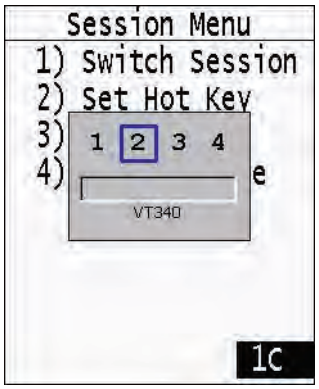
ITE configuration menus

%TECFG

2 In the Main Menu, tap **More**, and then tap **Session Menu** or press **4**. The Session Menu screen appears.



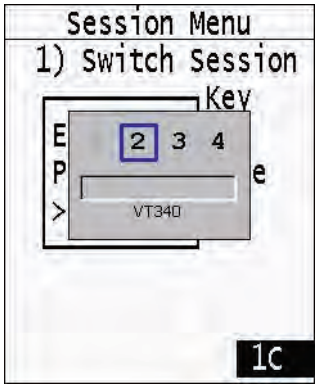
3 To change the current session, tap **Switch Session** or press **1**.



4 Tap a session number or use the cursor keys to select a different session.

5 To set the hot key, tap **Set Hot Key** and use the cursor up or down keys to cycle through the function keys. Press **Enter** to choose the hot key. The hot key is disabled by default.

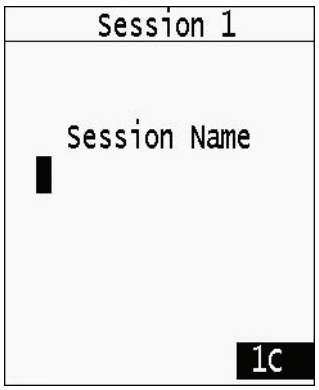
6 To copy parameters from the current session to another session, tap **Copy Setup** and enter the password when prompted (default is `cr52401`). This screen appears:



Parameters are copied from the current session (grayed out in the dialog box). Tap a session number or use the cursor keys to copy settings to that session.

If you want to copy settings from a different session, you need to change sessions as described in Steps 3 and 4.

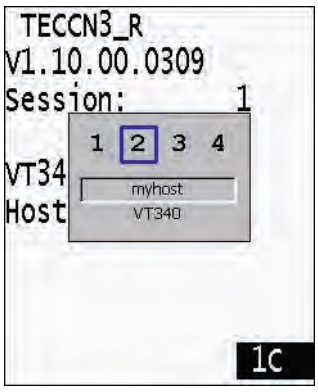
7 To assign customizable host names or friendly names to the current session, tap **Session Name**. The Session Name screen appears.



8 Enter a name for the session and then press **Enter**. Length is 1 to 16 characters (1 to 64 for CV30).

Switching Sessions Quickly

When ITE is running, double-tap the upper left corner of the computer screen.



Press the number of the session to switch to, or tap that number on the screen.

Using Voice over IP

ITE provides support for these Voice over IP (VOIP) applications:

- HipVoice
- TABLETMedia iTalkie™

You can launch the VOIP application by tapping the Voice button in the ITE Toolbar. For more information, see **"About Toolbar Items" on page 75.**

Note: After you install one of these applications on the Intermec computer, run ITE to automatically configure the PTT button and warm boot the computer.

Using ITE with HipVoice

When you tap the Voice button:

- if HipVoice is currently running, it is brought to the foreground.
- if HipVoice is not currently running, ITE launches the application.

Note: After you install HipVoice, the first launch may take 30 to 40 seconds.

The Windows Mobile Start menu and the HipVoice start menu appear. You can go to the HipVoice application to change contact information, login into a new session, send sticky notes or have a conversation.

Note: If you press the PTT button when ITE is running, HipVoice momentarily comes to the foreground and then control is returned to ITE.

To return control back to ITE, tap **Start** > **ITE**.

Using ITE with iTalkie

Tap the Voice button in the ITE Toolbar to launch iTalkie.

You can also choose the silent interface to keep iTalkie running in the background as you use ITE. Otherwise, iTalkie comes to the foreground each time you page someone or are paged by someone else.

With the silent interface enabled, when someone calls your computer, a dialog box appears asking if you want to accept the call.

- If you do not accept the call, ITE resumes.
- If you accept the call, the dialog box disappears and your call begins, and the call continues until the caller terminates the call.

You can continue to use ITE while you are in the call.

About VoIP Error Messages

If there is a problem with your VoIP application, an error message may appear when you tap the Voice button.

VOIP Error Message Descriptions

Error Message Text	Description
ERROR_FILE_NOT_FOUND (0x02)	The specified file was not found.
ERROR_PATH_NOT_FOUND (0x03)	The specified path was not found.
ERROR_DDE_FAIL (0x482)	The Dynamic Data Exchange (DDE) transaction failed.
ERROR_NO_ASSOCIATION (0x483)	There is no application associated with the given file name extension.
ERROR_ACCESS_DENIED (0x05)	Access to the specified file is denied.
ERROR_DLL_NOT_FOUND (0x485)	One of the library files necessary to run the application can not be found.

VOIP Error Message Descriptions (continued)

Error Message Text	Description
ERROR_CANCELLED (0x4C7)	The function prompted the user for additional information, but the user canceled the request.
ERROR_NOT_ENOUGH_MEMORY (0x08)	There is not enough memory to perform the specified action.
ERROR_SHARING_VIOLATION (0x20)	A sharing violation occurred.

Using the SnapShot Feature

You can use the SnapShot feature to take high-resolution pictures. For example, you might use SnapShot to take a picture of damaged goods in a warehouse.

SnapShot Sample Image

To use SnapShot, you need to add a SnapShot button to the ITE toolbar. For help, see **"To configure Toolbar options" on page 74.**

Note: SnapShot is supported by the CK3, CN3, and CN4 computers with an imager or color camera.

To capture images with SnapShot

1 In the ITE Toolbar, tap SS. The imager or camera turns on and the Imager screen shows streaming video. A date and time stamp appears at the bottom of the video frame. This sample was taken with the imager in a CN4 computer:

2 Center the subject in the streaming video frame, and tap **Take Picture** or press **Enter** to capture the scene. The PreviewImage screen appears, showing the captured image.

3 Tap **Accept** to save the image, or tap **Reject** to delete the image. By default, images are saved to the \My Documents\My Pictures directory on the computer.

After you accept an image, the name of the last saved image appears at the top of the main Imager screen. Image file names include the serial number of the computer, its IP address, and the date and time when the image was captured.

4 To exit SnapShot and return to ITE, tap **Menu** > **Exit**.

Or, to send pictures to the host, continue with the next procedure.

To send picture files to the host

1 Tap **Menu** > **Send Files**.

2 In the SendPictures list, check the check box for each file you want to send to the host. You can also tap **Options** > **Select All** or **Deselect All** as needed. By default, all files are selected.

3 Tap **Menu** > **FTP Files**. The files are sent to the host.

To delete files from the image directory

1 Tap **Menu** > **Send Files**.

2 In the SendPictures list, check the check box for each file you want to delete. You can also tap **Options** > **Select All** or **Deselect All** as needed. By default, all files are selected.

3 Tap **Menu** > **Delete Files**.

Configuring SnapShot Image Settings

When you are running SnapShot, you can change image settings as follows:

- To choose an image type, tap **Settings** > **Image Type** and choose **JPG** or **BMP**. The default image type is .jpg.
- To change the picture resolution, tap **Settings** > **Resolution** and choose **Low**, **Medium**, or **High**. Typical picture resolution is as follows:.

Resolution	EA21 Imager	Color Camera
Low	320 x 200 pixels	160 x 120 pixels
Medium	640 x 400 pixels	800 x 600 pixels
High	1280 x 800 pixels	1600 x 1200 pixels

The default picture resolution is Low.

- To add a text string to the picture, tap **Settings** > **Text** >**Add Text**, enter the text string in the entry field, and tap **Save**.
- To delete a text string, tap **Settings** > **Text** > **Clear Text**.
- (Imager only) To change the brightness setting, tap **Settings** > **Auto Brightness**. Auto Brightness is enabled by default and automatically adjusts the contrast and brightness of the image based on the current lighting.

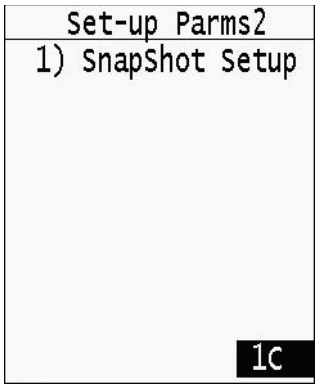
Configuring SnapShot Network Settings

You can configure these SnapShot network settings:

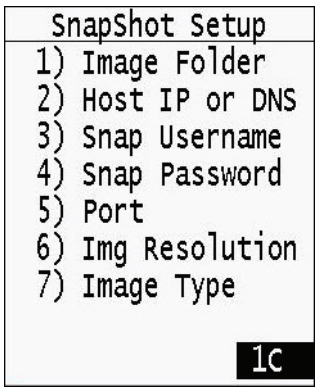
- Folder in which captured images are saved
- Host IP or DNS where image files are sent
- Username
- Password
- Port

To configure SnapShot network settings

1. Follow Steps 1 to 3 of **"To configure ITE setup parameters" on page 23.**
2. In the Set-up Parms screen, tap **More** twice or press **7** twice.



3. Tap **SnapShot Setup** or press **1**.



4 Tap an option to select it, make changes as needed, and press **Enter**.

SnapShot Network Settings Descriptions

Setting	Description
Image Folder	Path to and name of the folder to which images are saved. Default is "\my documents\my pictures".
Host IP or DNS	IP address to which image files are sent. Default is null.
Snap Username	User name required for access to the host (maximum 21 characters).
Snap Password	Password required for access to the host (maximum 21 characters).
Port	Port number for the host. Range is 0 to 65535. Default is 21.
Img Resolution	Resolution level for images. Choose Low (smallest file size), Medium, or High (best quality). Default is Low.
Image Type	File type for images. Choose JPG or BMP. Default is JPG.

You can also configure SnapShot settings in the te_settings.ini file. For more information, see **"Camera and Imager Parameters" on page 113.**

4

Customizing Your Configuration

This chapter describes the procedures you can use to customize the standard Intermec Terminal Emulator and includes these sections:

- **Customizing Intermec Terminal Emulator**
- **Using the Auto-Login Feature**
- **Creating a Custom Parameter Setup File**
- **Changing Text in Menus, Messages, and Settings**
- **Preinitializing the ITE Program**
- **Remapping the Computer Keypad**
- **Remapping Displayed Characters**
- **Implementing ITCColor.dat Attribute Colors**
- **Customizing 5250 EBCDIC to ASCII Translation**

Customizing Intermec Terminal Emulator

You customize the ITE program by creating or modifying configuration files and then downloading them to your computer.

Note: If a config.dat file is present on your computer, its settings are backed up in a config.old file and then written into a TE_Settings.ini file. If there is no config.dat file on your computer, all settings are written to the TE_Settings.ini file.

Using the Auto-Login Feature

Use the auto-login feature to send the same login information each time you log in to the host. When you start the Intermec Terminal Emulator application, the computer checks for an auto-login script file. If a script file exists, the computer runs the login commands from the auto-login script file before the ITE program starts.

To use the auto-login feature, develop an auto-login script file and load it on the computer. This section explains how to develop a script and includes a list of control characters and the procedure for disabling auto-login.

Developing Auto-Login Script Files

A typical auto-login script file consists of Input and InputHidden commands followed by a HostName command, followed by a series of WaitFor and Send commands. A very simple script file may not have any input commands if all of the computers are using the same account.

Note: The auto-login script must be an ASCII text file with autolog.scr as the required file name or the file is not processed.

Commands for Auto-Login Script Files

You can use several commands to create auto-login script files. All commands are case-sensitive. For example, WaitFor is a command, but Waitfor is not a valid command. For examples of script files, see **"Sample Auto-Login Script Files" on page 99.**

Display

The user decides if the data from the host application appears on the computer screen. For additional security, the display can be turned off from updating messages from the host during the autologin process.

Display has three parameters: OFF, ON, and HREF. Display ON enables displaying data received from the host. Display OFF disables displaying data received from the host. HREF is used to specify a bitmap to display instead of the information received from the host, if any. Use the following syntax to specify the file.

```
Display "<Link HREF=file://\te2000\ball.bmp></Link>"
```

The bitmap appears on the screen using its actual dimensions and will not be adjusted to fit the screen size. No further screen updates occur until the following associated command:

```
Display "ON"
```

is executed in the auto-login script file to re-enable display of information received from the host.

Input

This is called with two parameters. The first one is a character string enclosed in quotes used as a prompt to the user. The second one is a string variable name indicating where the text string is stored.

InputHidden

Same as the Input script command except that user input is echoed as a string of asterisks.

HostName

This command is case-sensitive and must be presented as mixed-case letters. HostName is followed by a character string enclosed in quotes. The character string can be a host name or an asterisk. The HostName command acts as an IF clause. If the host name matches, the following section of the script file is executed up to the next HostName command. If an asterisk is used, it matches any host name.

Note: If a session (friendly) name is entered, then this is used in place of the host name or server IP name to section off the auto-login script.

WaitFor

Wait for a list of up to ten strings. The strings must be enclosed in quotes and must be separated by a comma. The strings cannot exceed 20 characters in length.

Send

This command sends a character string enclosed in quotes or a string variable to the host. The character string enclosed in quotes can have an embedded control key in the ITE application.

Pause “xxxxx”

Delays the computer for x milliseconds, halts computer operation from receiving and processing for the duration specified.

PromptSessionStart

If this variable is defined and set to any value other than 0, the application prompts the user to press **Enter:**

- before starting a Telnet session with the host.
- when the connection to the host is lost.

Do not put quotes around the variable.

This prompt does not appear when you use autologin restart, since doing so does not close an existing connection.

Restart "x"
Restarts the autologin script file. The "x" is a dummy argument.

Keyboard "0"
Disables the keyboard. Key presses are ignored.

Keyboard "1"
Enables the keyboard. Key presses are processed. The keyboard is enabled by default.

Note: Input the Keyboard "0" or Keyboard "1" command into the autologin script file after the PromptSessionStart command (if present) and after the HostName command (if present) but before another HostName command is found in the file.

(pound symbol)
Documents the script file. Text following a # (pound) symbol is considered a comment unless the # symbol is in a quoted string.

Using Auto-Login Search Strings

Some auto-login search string limitations are:

- Searches are case-sensitive.
- Maximum search string length is 20 characters.
- Each WaitFor command searches the entire screen from the top.

You can use line wrapping to look for unique strings. If a screen from the host has multiples of the word you are looking for, you can use the preceding spaces to identify a unique string.

Example: If the screen sent to the computer is:

```
Linux rlogin 2.4.6
login
```

The autologin script would be:

```
PromptSessionStart=1
HostName "*"
#wait for host login screen and send login and password
WaitFor "login"
Send "billy<ENTER>"
WaitFor "password"
Send "letmein<ENTER>"
```

Using Control Characters

You can include control characters in your auto-login script file. The control character must be enclosed by < > (angle brackets) in AutoLog.scr.

Note: Some control characters may be represented by their hexadecimal values.

3270 Control Characters

This table lists control characters for the ITE 3270 application.

3270 Control Characters for Auto-Login Script File

Control Character	Definition	Control Character	Definition
<CLEAR>	Clear	<INS>	Insert
<CUR_DN>	Cursor Down	<LTAB>	Left Tab
<CUR_LF>	Cursor Left	<NEWLN>	New Line
<CUR_RT>	Cursor Right	<PA1>	PA1
<CUR_UP>	Cursor Up	<PA2>	PA2
<DEL>	Delete	<PA3>	PA3
<ENTER>	Enter	<RESET>	Error reset
<ERS_EOF>	Erase EOF	<RTAB>	Right Tab
<F1> - <F24>	Function keys	<SPACE>	Space
<HOME>	Home		

5250 Control Characters

This table lists control characters for the ITE 5250 application.

5250 Control Characters for Auto-Login Script File

Control Character	Definition	Control Character	Definition
<ATTN>	Attention	<HOME>	Home
<CLEAR>	Clear	<INS>	Insert
<CUR_DN>	Cursor Down	<LTAB>	Left Tab
<CUR_LF>	Cursor Left	<NEWLN>	New Line
<CUR_RT>	Cursor Right	<RESET>	Error Reset
<CUR_UP>	Cursor Up	<ROLL_DOWN>	Roll Down
<DEL>	Delete	<ROLL_UP>	Roll Up
<ENTER>	Enter	<RTAB>	Right Tab
<ERS_EOF>	Erase Input	<SPACE>	Space
<F1> - <F24>	Function keys		

VT/ANSI Control Characters

This table lists control characters for the ITE VT/ANSI application.

VT/ANSI Control Characters for Auto-Login Script File

Control Character	Definition	Control Character	Definition
<ACK>	Acknowledgment	<F1> - <F20>	Function keys
<BEL>	Bell	<F21>	Toggles from Character mode/ Line Edit (block) mode
<BS>	Backspace	<FF>	Form Feed

VT/ANSI Control Characters for Auto-Login Script File (continued)

Control Character	Definition	Control Character	Definition
<CAN>	Cancel	<FS>	File Separator
<CR>	Carriage Return	<GS>	Group Separator
<CUR_DN>	Cursor Down	<HT>	Horizontal Tab
<CUR_LF>	Cursor Left	<INS>	Insert
<CUR_RT>	Cursor Right	<LF>	Line Feed
<CUR_UP>	Cursor Up	<LTAB>	Left Tab
<DC1>	Device Control 1 (XON)	<NAK>	Negative Acknowledge
<DC2>	Device Control 2	<NUL>	Null, or all zeros
<DC3>	Device Control 3 (XOFF)	<RS>	Record Separator
<DC4>	Device Control	<RTAB>	Right Tab
<DEL>	Delete	<SI>	Shift In
<DLE>	Data Link Escape	<SO>	Shift Out
<EM>	End of Medium	<SOH>	Start of Heading
<ENQ>	Enquiry	<SPACE>	Space
<ENTER>	Enter	<STX>	Start of Text
<EOT>	End of Transmission	<SUB>	Substitute
<ESC>	Escape	<SYN>	Synchronous Idle
<ETB>	End Transmission Block	<US>	Unit Separator
<ETX>	End of Text	<VT>	Vertical Tab

Loading the Auto-Login Script File

After you create an auto-login script, copy the file to your computer. For more information on copying files, see the user's manual for your computer.

To ensure that your customized files (such as AutoLog.scr, remap.cfg, TE_Settings.ini, or cfglit.dat) are executed, you need to copy the files to the directory where the ITE executable is stored. If the same file exists in more than one location, only the file stored in the directory with the highest precedence will be executed. The other files will be ignored.

The order of precedence is:

1. In the directory with the executable (\ITE for all computers).
2. In the root of the Secure Digital card, if present.
3. In the Flash File Store, if present.
4. In the computer root directory.

Disabling the Auto-Login Feature

To disable auto-login, you may rename or delete the AutoLog.scr file. Renaming the file ensures that you can use the same auto-login script file later by changing the name back to AutoLog.scr. If you want to enable a new script file, you can use the instructions in this section to rename a different script file to AutoLog.scr.

Follow these procedures to disable (or delete) the auto-login script file. The method depends on the type of computer you are using.

To disable (delete) the auto-login file

1. Using your web browser, access the IP address at http://<IP address>.
2. Double-click the **File Manager** desktop icon.
3. Select **File**.
4. Press **Del** to remove the auto-login file, which disables the auto-login feature.

For the computer, using Microsoft ActiveSync

1. Open an ActiveSync connection to the computer.
2. Browse to the auto-login file.
3. Right-click the file and choose **Delete** from the popup menu. The file is deleted.

   Or, choose **Rename** from the popup menu and rename the file to disable the feature.

Sample Auto-Login Script Files

You can use these sample script files as they are or as the starting point for creating your own auto-login script files.

Example 1: Auto-Login With All Computers Using the Same Account

```
HostName "*"                        #Use this to log into any host
WaitFor "login:"                    #Wait for the login prompt
Send "username<NEWLN>"              #Send the user name
WaitFor "Password:"                 #Wait for the password prompt
Send "letmein<ENTER>"               #Send the password
```

- The HostName command matches the host the user accesses.
- The WaitFor command waits for a string to be displayed by the host. WaitFor takes up to 10 strings, 20 characters long. The strings must be enclosed in quotes and separated by a comma.
- The first Send command sends a fixed user name, the second Send sends a fixed password.
- Angle brackets < and > can enclose uppercase mnemonics or hexadecimal values.

Example 2: Auto-Login With Different User Names and Passwords

```
Input "Enter user name", username       #Prompt for user name
InputHidden "Enter password", password  #Prompt for password
HostName "*"                            #Prompt for host name
WaitFor "login:"                        #Wait for login prompt
Send username                           #Send the user name
Send "<NEWLN>"                          #Send a carriage return
WaitFor "Password:"                     #Wait for password prompt
Send password                           #Send the users password
Send "<ENTER>"                          #Send a carriage return
```

- The Input and Send commands use input variables. Input commands require a prompt string followed by a comma and a variable name in which to store the string.

- The InputHidden command displays "*" in place of any characters the user types. Place all Input commands before the first HostName command.
- The Send command only accepts a single argument, so you need two Send commands to send the user name and a carriage return.

Example 3: Auto-Login to an Application

Example 3 modifies the script file in Example 2. The additional modification (which starts with WaitFor "Main Menu") allows you to move automatically to an application after logging in.

```
Input "Enter user name", username       #Prompt for user name
InputHidden "Enter Password", password  #Prompt for password
HostName "*"
WaitFor "login:"                        #Wait for login prompt
Send username                           #Send the user name
Send "<NEWLN>"                          #Send a carriage return
WaitFor "Password:"                     #Wait for password prompt
Send password                           #Send the users password
Send "<ENTER>"                          #Send a carriage return
WaitFor "Main Menu"                      #Wait for the main menu
Send "3"
Send "<ENTER>"                           #Pick option 3 from menu
WaitFor "Wip Menu"                       #Await work-in-process menu
Send "1"
Send "<ENTER>"                           #Pick option 1 from menu
```

Example 4: Auto-Login With Variable Processing

```
Input "Enter user name", username       #Prompt for user name
InputHidden "Enter Password", password  #Prompt for password
HostName "BigHost"                      #Use script portion for BigHost
WaitFor User:"                          #Wait for the user prompt
Send username                           #Send the user name
Send "<NEWLN>"                          #Send a carriage return
WaitFor "Password:"                     #Wait for password prompt
Send password                           #Send the users password
Send "<ENTER>"                          #Send a carriage return
HostName "*"                            #Match any host name
WaitFor "login:"                        #Wait for login prompt
Send username                           #Send the user name
Send "<NEWLN>"                          #Send a carriage return
WaitFor "Password:"                     #Wait for password prompt
Send password                           #Send the users password
Send "<ENTER>"                          #Send a carriage return
WaitFor "Main Menu"                     #Wait for the main menu
Send "3"
Send "<ENTER>"                          #Pick option 3 from menu
WaitFor "Wip Menu"                      #Await work-in-process menu
Send "1"
Send "<ENTER>"                          #Pick option 1 from menu
```

- A section for the host name BigHost is added to the beginning of the script file. If you log into any host other than BigHost, the script file starts at the HostName "*" line. This allows for different processing on each host.

Restarting the Auto-Login

Restarts the auto-login script file from the correct HostName statement in the script file when a host session is broken. For this command to work, the WaitFor string must match the last data sent from the host. For example, if the WaitFor string is the login prompt "login:" with a space after the colon, the WaitFor string must include a space for the auto-login restart to work.

To use the Auto-Login Restart command, press the keys listed in Appendix C, **"Using the Computer Keypad."** You can also scan the following bar code. Note that Code 39 Full ASCII must be enabled in the firmware (default is disabled).

Auto-Login Restart

%ALRS

Creating a Custom Parameter Setup File

You can create a custom ITE setup file to preset almost any parameter you can set from the ITE configuration menus. These parameter settings become the default (cold start) configuration for the computer.

Note: Currently, Intermec does not support the imager via the "Barcode Parms" section described in Chapter 4. There are also some limitations to the laser implementation. If the next message (or similar) appears when you access ITE on your Intermec computer, tap **OK** to close the message.

```
ITE Image Scanner
Barcode Parms
menu options
NOT supported!
```

Upgrading from Config.dat Configuration

Note that the settings from the Config.dat file are the same as the settings for the TE_Settings.ini file. For example, the config.dat setting:

```
[Host A].Host
```

appears as:

```
session_1|host_a|host = 136.179.84.76
```

in the TE_Settings.ini file.

All values follow the [iccu values] section and use the pipe character to separate the names. The settings and literals are the same as the old config.dat with the exception of the use of the different naming convention using the pipe ("|"). Below are a few values from the config.dat file as they appear in the TE_Settings.ini file.

```
[iccu values]
   session_1|host_a|host = 136.179.84.76
```

```
session_1|host_a|port_number = 23
session_1|destructive_bs = 0
```

TE_Settings.ini Configuration

`"enable_sip" = 0 or 1`

This enables or disables the interaction between ITE and the onscreen keyboard. If the value is 1, ITE displays the SIP when it starts and when it gains focus. If the value is 0, ITE does not display the SIP.

`"sip_settings" = {674EC110-EFF0-47D3-B828-CDB2A6CCD3EB}`

This is a GUID (globally unique identifier) identifying the SIP that the ITE application is to use by default. This can be the GUID of any registered SIP in the system.

These are for debugging purposes only. They inform which version of ITE created the TE_Settings.ini file. For example, these values could be:

- program_name = TECCK3_R
- program_version = 1.0

TE_Settings.ini Parameter Formats

Each parameter in the setup file is followed by one of three different formats that indicates the type of parameter and the values it can contain. Formats are as follows:

- Literal strings: a list of fixed values to choose from.

  For example, Session 1 or 2 may qualify Screen Mode. It may take the value Center Cursor, Corner Mode, Page Mode, Lazy Mode, or Locked Mode. Session 1 is the default qualifier. These configuration lines are valid:

  ```
  screen_mode = Lazy Mode;
  session_1|screen_mode = Lazy Mode;
  session_2|screen_mode = Lazy Mode;
  ```

- Numeric parameters with minimum and maximum values. Parameters can be either decimal or hexadecimal:

  - Decimal parameters consist of digits 0 through 9.
  - Hexadecimal parameters consist of 0x or 0X, followed by 1 to 4 digits of 0 through 9, a through f, or A through F. These are equivalent: 160, 0xA0, and 0Xa0.

  For example, Port Number is a variable with a range of 0 to 65535. These lines are valid:

  ```
  port_number = 1;
  session_1|host_a|port_number = 1;
  session_2|host_a|port_number = 1;
  ```

- String parameters: variables with specific or minimum and maximum lengths.

  For example, Program Name is unqualified. It must have eight characters. These configuration lines are valid:

```
program_name = ABCDEFGH;
program_name = TECCK3_R;
```

TE_Settings.ini Parameters and Qualifiers

Note: If parameters are duplicated, an error is not generated. Instead, the computer processes the entire file and uses the last entered value of the duplicated parameter.

Parameters in the setup file apply to all computers unless otherwise noted here. This section lists each parameter and valid values. To use the default value for qualifiers that have a default, omit the parameter from the parameter setup file.

The cfglit.dat file specifies the text of setup menus or system messages. Parameters and qualifier strings in the setup file assume the default cfglit.dat is used. For instructions on how to change this file, see **"Changing Text in Menus, Messages, and Settings" on page 115.**

Setup Parameters

Setup Parameter Options and Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Data Stream	host_a|data_stream (default) host_b|data_stream host_c|data_stream	1 = 3270 2 = 5250 3 = VT/ANSI	VT/ANSI
Disconnect Value	host_a|disconnect_val host_b|disconnect_val host_c|disconnect_val	Numeric. Range is 0 to 255.	12
Host Name	host_a|host (default) host_b|host host_c|host	String of up to 16 characters.	Null
KeyAlive	session_1|host_a|keyalive_key session_1|host_a|keyalive_timer	Numeric. Range is 0 to 120. For valid values, see **"About the KeyAlive Function" on page 32.**	0 (disabled)
Port Number	host_a|port_number (default) host_b|port_number host_c|port_number	Numeric. Range is 0 to 65535.	23
Printer Address	host_a|printer_addressString host_b|printer_addressString host_c|printer_addressString	String of up to 16 characters.	Null
Printer Port	host_a|printer_portNumeric host_b|printer_portNumeric host_c|printer_portNumeric	Numeric. Range is 0 to 65535.	23
RTC over TCP	host_a|rtc_over_tcp (default) host_b|rtc_over_tcp host_c|rtc_over_tcp	Enabled or Disabled.	Disabled

Setup Parameter Options and Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
Server IP	host_a|server_ip (default) host_b|server_ip host_c|server_ip	Numeric. Range is 1 to 16.	16
Telnet	telnet	Enabled or Disabled.	Enabled
Terminal Type	host_a|terminal_type (default) host_b|terminal_type host_c|terminal_type	Numeric. Range is 0 to 255.	83
Unit Number (same as radio number)	host_a|unit_# (default) host_b|unit_# host_c|unit_#	Numeric. Range is 0 to 127.	127
Upline Protocol	upline_prot	0 = telnet 1 = SDLC	telnet

Bar Code Parameters

Bar Code Parameter Descriptions

Parameter	Session [1], 2, 3, 4	Values	Default Value
Concatenate	concatenate	Enabled or Disabled.	Disabled
MOD 10 Check	mod_10_check	Enabled or Disabled.	Disabled
Scan All Fields	scan_all_flds	Enabled or Disabled.	Disabled
Scan Postamble Character	scan_postchar	Numeric. Range is 0 to 255.	32
Scan Preamble Character	scan_prechar	Numeric. Range is 0 to 255.	32
Scanner Type	scanner_type	No Scanner Wand Laser Wand Emulate Auto Detect	No Scanner
Stream Scan	stream_scan	Enabled or Disabled.	Disabled
Use Wedge Mode	use_wedge_mode	Enabled or Disabled.	Disabled

Bar Code Symbology Parameters

Bar Code Symbology Parameter Descriptions

Symbology	Session [1], 2, 3, 4	Values	Default Value
ABC Codabar	abc_codabar	When enabled, scanner_type is 33.	1
Codabar	codabar	When enabled, scanner_type is 32.	1
Code 11	code_11	When enabled, scanner_type is 56.	1
Code 39	code_39	When enabled, scanner_type is 40.	1
Code 93	code_93	When enabled, scanner_type is 72.	1
Code 128	code_128	When enabled, scanner_type is 64.	1
Computer Identics 2 of 5	ci_2of5	When enabled, scanner_type is 51.	1

Bar Code Symbology Parameter Descriptions (continued)

Symbology	Session [1], 2, 3, 4	Values	Default Value
EAN	ean	When enabled, scanner_type is 17.	1
Interleaved 2 of 5	int_2of5	When enabled, scanner_type is 50.	1
Plessey	plessey	When enabled, scanner_type is 8.	1
Straight 2 of 5	str_2of5	When enabled, scanner_type is 49.	1
UPC	upc	When enabled, scanner_type is 16.	

Generic Bar Code Options

Note: Generic bar code options must be qualified by one of the bar code symbology strings. For example: "session_1|upc|max_length = 13;".

Generic Bar Code Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Drop Leading	upc|drop_leading ean|drop_leading code_128|drop_leading code_39|drop_leading codabar|drop_leading abc_codabar|drop_leading str_2of5|drop_leading int_2of5|drop_leading ci_2of5|drop_leading code_11|drop_leading code_93|drop_leading plessey|drop_leading	Numeric. Range is 0 to 15.	0
Drop Trailing	upc|drop_trailing ean|drop_trailing code_128|drop_trailing code_39|drop_trailing codabar|drop_trailing abc_codabar|drop_trailing str_2of5|drop_trailing int_2of5|drop_trailing ci_2of5|drop_trailing code_11|drop_trailing code_93|drop_trailing plessey|drop_trailing	Numeric. Range is 0 to 15.	0

Generic Bar Code Option Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
Fixed Length 1	upc|fix_length_1 ean|fix_length_1 code_128|fix_length_1 code_39|fix_length_1 codabar|fix_length_1 abc_codabar|fix_length_1 str_2of5|fix_length_1 int_2of5|fix_length_1 ci_2of5|fix_length_1 code_11|fix_length_1 code_93|fix_length_1 plessey|fix_length_1	Numeric. Range is 0 to 99.	0
Fixed Length 2	upc|fix_length_2 ean|fix_length_2 code_128|fix_length_2 code_39|fix_length_2 codabar|fix_length_2 abc_codabar|fix_length_2 str_2of5|fix_length_2 int_2of5|fix_length_2 ci_2of5|fix_length_2 code_11|fix_length_2 code_93|fix_length_2 plessey|fix_length_2	Numeric. Range is 0 to 99.	0
Fixed Length 3	upc|fix_length_3 ean|fix_length_3 code_128|fix_length_3 code_39|fix_length_3 codabar|fix_length_3 abc_codabar|fix_length_3 str_2of5|fix_length_3 int_2of5|fix_length_3 ci_2of5|fix_length_3 code_11|fix_length_3 code_93|fix_length_3 plessey|fix_length_3	Numeric. Range is 0 to 99.	0
Fixed Length 4	upc|fix_length_4 ean|fix_length_4 code_128|fix_length_4 code_39|fix_length_4 codabar|fix_length_4 abc_codabar|fix_length_4 str_2of5|fix_length_4 int_2of5|fix_length_4 ci_2of5|fix_length_4 code_11|fix_length_4 code_93|fix_length_4 plessey|fix_length_4	Numeric. Range is 0 to 99.	0

Generic Bar Code Option Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
GSN Value	CI20f5|gsn_value codabar|gsn_value code 11|gsn_value code 39|gsn_value code 93|gsn_value ean|gsn_value int_2of5|gsn_value plessey|gsn_value str_2of5|gsn_value upc|gsn_value	Always set to 0.	0
Maximum Length	upc|max_length ean|max_length code_128|max_length code_39|max_length codabar|max_length abc_codabar|max_length str_2of5|max_length int_2of5|max_length ci_2of5|max_length code_11|max_length code_93|max_length plessey|max_length	Numeric. Range is 0 to 99.	0
Minimum Length	upc|min_length ean|min_length code_128|min_length code_39|min_length codabar|min_length abc_codabar|min_length str_2of5|min_length int_2of5|min_length ci_2of5|min_length code_11|min_length code_93|min_length plessey|min_length	Numeric. Range is 0 to 99.	0

UPC Options

UPC Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Add-On 2	upc|add-on_2	Enabled or Disabled.	Disabled
Add-On 5	upc|add-on_5	Enabled or Disabled.	Disabled
Expand E to A	upc|expand_e_to_a	Enabled or Disabled.	Disabled
System 0 UPCE	upc|sys_0_upce	Enabled or Disabled.	Disabled
System 1 UPCE	upc|sys_1_upce	Enabled or Disabled.	Disabled

EAN Options

EAN Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Add-On 2	ean|add-on_2	Enabled or Disabled.	Disabled
Add-On 5	ean|add-on_5	Enabled or Disabled.	Disabled
Expand 8 to 13	ean|expand_8to13	Enabled or Disabled.	Disabled

Code 39 Options

Code 39 Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Auto-Encoded	auto-encoded	Enabled or Disabled.	Disabled
Check Digit	code_39|chk_digit	Enabled or Disabled.	Disabled
Encoded	encoded	Enabled or Disabled.	Disabled
Encoded Save	encoded_save	Enabled or Disabled.	Disabled
Full ASCII	code_39|full_ascii	Enabled or Disabled.	Disabled

Code 11, Interleaved 2 of 5, and Plessey Options

Code 11, Interleaved 2 of 5, and Plessey Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Code 11 Check Digit 1	code_11|chk_dig_1	Enabled or Disabled.	Disabled
Interleaved 2 of 5 Chk Digit	int_2of5	Enabled or Disabled.	Disabled
Plessey MOD 10 Check	plessey|mod10_chk	Enabled or Disabled.	Disabled

Code 128 Options

Code 128 Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
No UCC Type	code_128|no_ucc_type	Enabled or Disabled.	Disabled
UCC/EAN	code_128|ucc/ean	Enabled or Disabled.	Disabled
UCC F1 Value	code_128|ucc_f1_value	Numeric. Range is 0 to 255.	0

3270 Protocol Options

3270 Protocol Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Allow Alias	3270_allow_alias	Enabled or Disabled.	Disabled
Allow Negotiate About Window Size (NAWS)	allow_naws	Enabled or Disabled.	Disabled
Any Auto Enter	any_auto_enter	Enabled or Disabled.	Disabled

3270 Protocol Option Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
Auto Enter Scan	auto_entr_scn	Enabled or Disabled.	Enabled
Auto Tab Scan	auto_tab_scan	Enabled or Disabled.	Disabled
Bright (BRT) Auto Enter	brt_auto_enter	Enabled or Disabled.	Disabled
Device Name	3270_device_name	String of 0 to 30 characters.	Null
Keyboard Unlock	keybrd_unlock	Enabled or Disabled.	Disabled
Origin Set	origin_set	Enabled or Disabled.	Disabled
Skip Field Exit	skip_fldexit	Enabled or Disabled.	Disabled

5250 Protocol Options

5250 Protocol Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
3477-Fx Mode	3477-fx_mode	Enabled or Disabled.	Disabled
Allow Alias	5250_allow_alias	Enabled or Disabled.	Disabled
Allow RTL	allow_rtl	Enabled or Disabled.	Enabled
Allow Negotiate About Window Size (NAWS)	allow_naws	Enabled or Disabled.	Disabled
Auto Tab Scan	auto_tab_scan	Enabled or Disabled.	Disabled
Beep On Error	beep_on_error	Enabled or Disabled.	Disabled
Device Name	devicename	String of length 0 to 30 characters.	Null
Destructive BS	destructive_bs	Enabled or Disabled.	Disabled
Lock Error Message	lock_error_msg	Enabled or Disabled.	Disabled
Scan AutoEnter	scan_autoenter	Enabled or Disabled.	Disabled
Scan Length Error	scan_lengtherr	Enabled or Disabled.	Disabled
Skip Field Exit	skip_fldexit	Enabled or Disabled.	Disabled
Use Color	use_color	Enabled or Disabled.	Disabled

VT/ANSI Protocol Options

VT/ANSI Protocol Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Allow LineMode	allow_linemode	Enabled or Disabled.	Enabled
Allow Negotiate About Window Size (NAWS)	allow_naws	Enabled or Disabled.	Disabled
AnswerBack	answerback	String of length 0 to 50 characters.	Computer serial number
Any Auto Enter	any_auto_enter	Enabled or Disabled.	Disabled
Auto Enter Scan	auto_entr_scn	Enabled or Disabled.	Enabled
Auto Tab Scan	auto_tab_scan	Enabled or Disabled.	Disabled
Auto Wrap	auto_wrap	Enabled or Disabled.	Disabled

VT/ANSI Protocol Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
CR to CRLF	cr_to_crlf	Enabled or Disabled.	Disabled
DEL to BS	del_to_bs	Enabled or Disabled.	Disabled
Discrete Bells	discrete_bells	Enabled or Disabled.	Disabled
Do Gold Key	do_gold_key	Enabled or Disabled.	Enabled
Do UTF-8	do_utf8	Enabled or Disabled.	Disabled
Ignore Data Logic Extensions	ignore_dl_ext	Enabled or Disabled.	Disabled
Keypad Mode	keypad_mode	Numeric Application	Numeric
Local Echo	local_echo	Enabled or Disabled.	Disabled
Lock Mode	lock_mode	Enabled or Disabled.	Disabled
RS-232 BaudRate	rs232_baudrate	4 = 9600 (default) 5 = 19200 6 = 57600 7 = 115200	9600
RS-232 DataBits	rs232_databits	7 8	8
RS-232 Flow	rs232_flow	NONE DTR XON/XOFF	NONE
RS-232 Parity	rs232_parity	NONE EVEN ODD	NONE
RS-232 StopBits	rs232_stopbits	1 2	1
Screen Lock	screen_lock	Enabled or Disabled.	Disabled
Send XON	send_xon	Enabled or Disabled.	Enabled
Terminal Mode	terminal_mode	7-Bit 8-Bit	7-Bit
Terminal Type	terminal_id	String of length 0 to 30 characters.	Null string, undefined
Terminal Setup	term_setup	ANSI VT100 VT220 VT320 VT340 IBM 330x	VT340
Transmit BS	transmit_bs	Enabled or Disabled.	Disabled
Use PC Character Set	use_pc_char_set	Enabled or Disabled.	Disabled
User Key Locked	userkey_locked	Enabled or Disabled.	Disabled
VT Cursor Mode	vt_cursor_mode	Cursor Application	Cursor
VT220 Mode	vt220_mode	Char Block	Char

Generic Protocol Options

Generic Protocol Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Extended Commands	extended_cmds	Enabled or Disabled.	Disabled
Host View Sze	host_view_sze	1-80 (3270) 80,132 (5250) 80 (VT/ANSI)	NA

Display Options

Display Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Code Page	code_page	1 = English 2 = Cyrillic (Russian), 3 = Greek 4 = Hebrew, 5 = Central Europe, 6 = Latin 2, 7 = Turkish, 8 = Cyrillic Win (Russian), 9= Arabic	English
Cursor Mode	cursor_mode	Underln Blink Block Blink Underline Block (default)	Block
Func Hotspot	func_hotspot	Enabled or Disabled.	Enabled
Ignore Bold	ignore_bold	Enabled or Disabled.	Disabled
Ignore CnrTaps	ignore_cnrtaps	Enabled or Disabled.	Enabled
Menu Hotspot	menu_hotspot	Enabled or Disabled.	Enabled
Select Font	select_font	Lucida Console Courier New Courier New Bold Cour. N.B. Italic	Lucida Console (CK32, CK61, CN3) Courier New (CV30)
URL Hotspots	url_hotspots	Enabled or Disabled.	Disabled

Miscellaneous Options

Miscellaneous Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Background Color	session_1|background_rgb|blue = 0 session_1|background_rgb|green = 0 session_1|background_rgb|red = 0	Numeric. Range is 0 to 255.	0

Miscellaneous Option Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
Change Menu Password	change_menu_password	String of 1 to 10 characters. You must enable and set the password before you can change it. Use "Main Menu Password" to enable the password.	3193693
Com Select	com_select	COM1 COM2 COM3	NA
Foreground Color	session_1|foreground_rgb|blue = 255 session_1|foreground_rgb|green = 255 session_1|foreground_rgb|red = 255	Numeric. Range is 0 to 255 (default is 255).	255
Main Menu Password	menu_password	Enabled or Disabled. You must enable and set the password to access the Main Menu. Use "Change menu password" to set the password.	Disabled
Print Device	print_device	Bluetooth Print RS232 Print IRDA Print Network Print	Bluetooth Print (CK3, CK32, CN3, CN4) RS232 Print (CV30) IRDA Print (CK61)
Reader Address	reader_address	String of 0 to 16 characters.	Null
RFID Enabled	rfid_enabled	Enabled or Disabled.	Disabled
RFID Setup	rfid_setup	0 Local Remote	0 Local (CK3, CK61, CN3) Remote (CK32, CV30)

LCD Options

LCD Option Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Annunciator Position	annun_position	Upper Right Upper Left Lower Right Lower Left Stealth	Lower Left (CK3, CK32, CK61, CN3) Stealth (CV30)
Define Height (Scroll Window)	define_height	Numeric. Range is 1 to 24.	8
Define Width (Scroll Window)	define_width	Numeric. Range is 1 to 80.	8
Key Uppercase	key_uppercase	Enabled or Disabled.	Disabled
Screen Columns	screen_cols	Numeric. Range is 16 to 80.	20
Screen Mode	screen_mode	Center Cursor Corner Mode Page Mode Lazy Mode Locked Mode	Corner Mode

LCD Option Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
Screen Rows	screen_rows	Numeric. Range is 8 to 25 (8 to 27 for CV30 only).	10
Scroll Window	scroll_window	Screen Size Scroll Setting Tab Size	Tab Size
XOrigin	xorigin	Numeric. Range is 0 to 79.	0
YOrigin	yorigin	Numeric. Range is 0 to 23.	0

Non-Session-Specific Parameters

Non-Session Specific Parameter Descriptions

Parameters	Session [1], 2, 3, 4	Values	Default Value
No ScanAhead	no_scanahead	Enabled or Disabled.	Disabled
ParmsBySession	parmsbysession	Enabled or Disabled.	Disabled
No Lockdown	no_lockdown	Enabled or Disabled.	Disabled
No auto-start	no_auto-start	Enabled or Disabled.	Disabled
Program Name (appears on initialization and version screens)	program_name	String of length 1 to 8 characters.	NA
Program Version (appears on initialization and version screens)	program_version	String of length 1 to 4 characters.	NA
OOR Monitor	oor_monitor	Enabled or Disabled.	Disabled
Enable SIP	enable_sip	0: ITE does not display the SIP onscreen. 1: ITE displays SIP when it starts and gains focus.	0 (CK32, CK61) 1 (CK3, CN3, CN4)
Key Event	key_event	Enabled or Disabled.	Disabled
Return Result (test feature)	return_result	Enabled or Disabled. If disabled, extended commands (#K only) do not return results to the host application.	Enabled
Setup Parms Menu Password	password	String of 1 to 10 characters.	CR52401

Camera and Imager Parameters

Note: These settings are supported only by the CK3, CN3, and CN4 computers with an imager or color camera.

Camera and Imager Parameter Descriptions

Option	Session [1], 2, 3, 4	Values	Default Value
Image Folder	image_folder	Path to the folder where images are stored.	\my documents\my pictures
Host IP or DNS	host_ip_or_dns	IP address of the host or DNS server.	NA

Camera and Imager Parameter Descriptions (continued)

Option	Session [1], 2, 3, 4	Values	Default Value
Snap UserName	snap_username	User name required for host access. Maximum of 21 characters.	NA
Snap Password	snap_password	Password required for host access. Maximum of 21 characters.	NA
Port	port	Port number to which images are sent.	21
Img Resolution	img_resolution	Resolution of saved images: 0: Low (smallest file size). 1: Medium. 2: High (best detail).	Low
Image Type	image_type	File type for saved images: 0: JPG format. 1: BMP format.	JPG

Additional Main Menu 2 Options

Additional Main Menu 2 Option Descriptions

Options	Session [1], 2, 3, 4	Values	Default Value
Session Name	session_name	String of 0 to 64 characters.	Null
Set Hot Key	set_hot_key	F1 to F24. Default is -1.	None
Shift F13-F24	shift_f13_f24	Enabled or Disabled.	Disabled
Type-Ahead	type-ahead	Enabled or Disabled.	Enabled
Key Event	key_event	Enabled or Disabled.	Disabled

Debug Parameters

Caution: ITE_DBG controls are reserved for Intermec technical staff and disabled by default. Do not attempt to enable these controls.

These debug events have no session qualifiers.

dbg_3270 = 0
dbg_5250 = 0
dbg_ansi = 0
dbg_ascii = 0
dbg_autologin = 0
dbg_display = 0
dbg_ebcdic = 0
dbg_events = 0
dbg_extend = 0
dbg_hex = 0
dbg_kbd = 0
dbg_kbddbg = 0
dbg_network = 0
dbg_recv = 0

dbg_rfiddata = 0
dbg_rfiddev = 0
dbg_rpc = 0
dbg_rtc = 0
dbg_scandata = 0
dbg_scandev = 0
dbg_scanparms = 0
dbg_send = 0
dbg_settings = 0
dbg_sip = 1
dbg_startup = 0
dbg_telnet = 0

Changing Text in Menus, Messages, and Settings

To change the text in the ITE configuration menus, configuration parameters, or system messages, you modify strings in the cfglit.dat file.

An identification (ID) number identifies each literal string. To create your own literal file, you create a text file that associates these numbers with the actual literal strings. You then use makelit.exe to convert the text file to a format the configuration program can use.

Each line in the literal text file begins with the literal ID number. After the ID number, you type the quoted string that is used when that ID number is referenced. If you omit an ID number, its string appears as "Bad Literal File" when you run the program in the computer.

Literal ID numbers are available upon request from Intermec. Contact your Intermec representative for more information about ID numbers.

You can create a sample file containing the default literal strings using makelit.exe to "reverse engineer" the standard cfglit.dat file. To do this, type the following command line to unpack cfglit.dat into a cfglit.txt file:

```
makelit -r cfglit.dat cfglit.txt
```

The cfglit.txt file this command creates contains all the default strings the configuration program uses. One line in cfglit.txt looks like this:

```
0x2f10 "RS232 PORTIN USE \n PLEASE WAIT!"
```

"0x2f10" is the literal ID number for the RS-232 port-in-use message that appears when a personal computer sends an RS-232 command to the TE program. The message text follows the ID number in a quoted string. The embedded "\n" sequence within the quoted string indicates a "new line" character and outputs a carriage return/line feed. To change the text of the message that appears, change the quoted string.

For example, change the previous line to look like this:

```
0x2f10 "Printing \n Please Wait!"
```

When you have a text file with one line for every ID number, use makelit.exe to convert the file to an indexed literal file. If your text file is named cfglit.txt, you would type the following command which creates the new literal cfglit.dat file.

```
makelit cfglit.txt cfglit.dat
```

For help with downloading the file, see the computer user's manual.

Preinitializing the ITE Program

To preinitialize the ITE program, you must name the 3270 initialization file as 3270.ini, the 5250 initialization file as 5250.ini, or the VT/ANSI initialization file as VT220.ini. The file is processed when you reset or warm boot the computer. The file is processed as if the radio had received the data, and must be in the "on-air" format.

Data is encoded in binary format. To create the .ini file, you may need a hex editor or similar program.

Preinitializing the 3270 Program

3270.ini contains 3270 data stream commands and orders. Below is the format for the 3270 data stream. The information assumes you have a working knowledge of the data stream command formats or escape sequences, or both. The following 3270 commands and orders are supported:

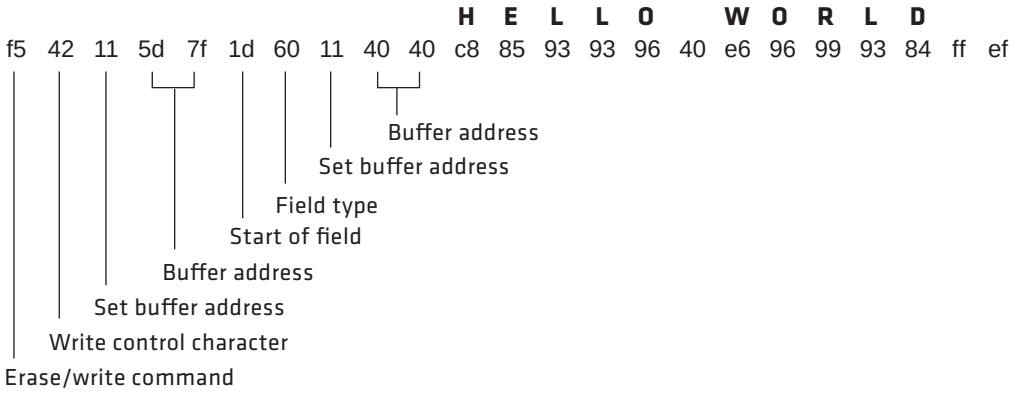
Supported 3270 Commands

Value	Command	Value	Command
0xf1	Write	0x7e	Erase write alternate
0xf2	Read buffer	0x6e	Read modified all
0xf5	Erase write	0x6f	Erase all unprotected
0xf6	Read modified		

Supported 3270 Orders

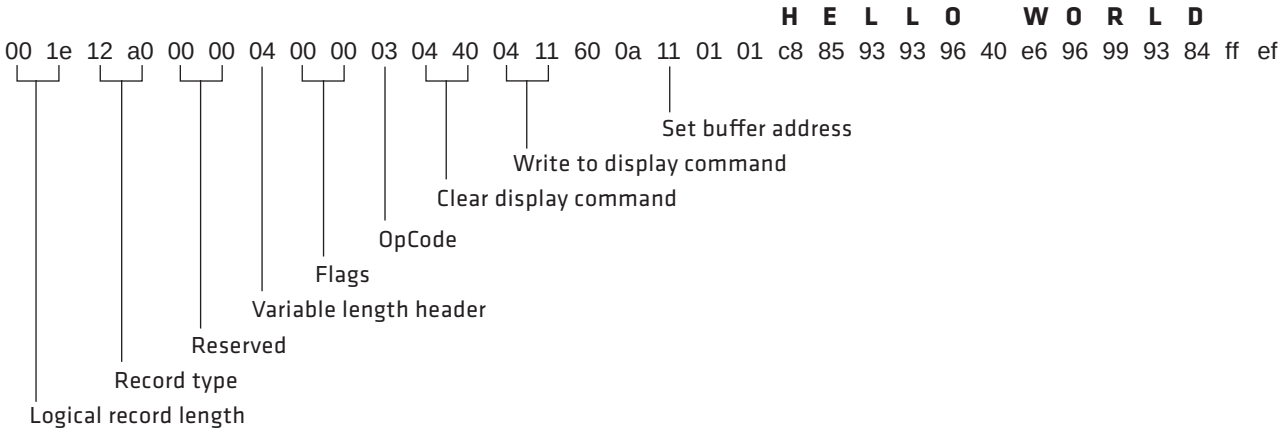
Value	Command	Value	Command
0x07	Beep (Intermec extension)	0x13	Insert cursor
0x09	Program tab	0x14	Repeat to address
0x11	Set buffer address	0x1d	Start of field
0x12	Erase unsupported to address	0x1f	Scanner (Intermec extension)

The following example shows how to display "HELLO WORLD" from within a data stream initialization file. The line of hexadecimal digits represent the binary values that must be stored in the initialization files.


H E L L O W O R L D
f5 42 11 5d 7f 1d 60 11 40 40 c8 85 93 93 96 40 e6 96 99 93 84 ff ef
Buffer address
Set buffer address
Field type
Start of field
Buffer address
Set buffer address
Write control character
Erase/write command

Preinitializing the 5250 Program

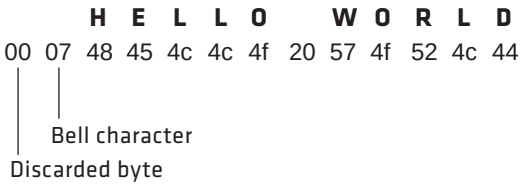
The following example shows how to display "HELLO WORLD" and beep the beeper from within a data stream initialization file. The line of hexadecimal digits represent the binary values that must be stored in the initialization files.


H E L L O W O R L D
00 1e 12 a0 00 00 04 00 00 03 04 40 04 11 60 0a 11 01 01 c8 85 93 93 96 40 e6 96 99 93 84 ff ef
Set buffer address
Write to display command
Clear display command
OpCode
Flags
Variable length header
Reserved
Record type
Logical record length

Preinitializing the VT/ANSI Program

The VT220.ini file starts with a single byte that the computer ignores. This byte should always be 0 (zero). The remainder of the file contains standard computer escape sequences.

The following example shows how to display "HELLO WORLD" and beep the beeper from within a data stream initialization file. The line of hexadecimal digits represent the binary values that must be stored in the initialization files.



Remapping the Computer Keypad

Note: These instructions assume the remap.cfg file is downloaded onto your computer. For help, see the computer user's manual.

You may need to remap the computer keypad to send a key in ITE that is not on a standard 101-key keyboard. You can also remap a computer key to transmit a text string or message to the personal computer.

To remap the computer keys, you create the remap.cfg file and add a Remap command to remap a computer key. You can remap a single key or a two-key sequence. You can add a Remap command or create a macro in the remap.cfg file that remaps a single key or a two-key sequence.

You can remap any computer key or two-key sequence that does not perform a specific function on the computer. For example, you can remap the [B] key because it only types the lowercase letter B.

Each computer key or two-key sequence generates a 4-digit hexadecimal remap code as listed in the **"Key Code Table" on page 120.** The key code tables list the 4-digit hexadecimal codes for ASCII characters for the computers. These codes identify the key or keys pressed. For example:

Key	Action	4-Digit Hex Key Code
[B]	Types a lowercase B	0062
[SHIFT] [B]	Types an uppercase B	0042
None	0002	

Remapping a Key or Two-Key Sequence

1. Choose the key or two-key sequence to remap.
2. Determine the current 4-digit hexadecimal code of the keys and the code you will enter to remap the keys. For help, see **"Key Code Table" on page 120.**
3. Connect the computer to your personal computer.
4. Using any text editor, enter the keys you want remapped on individual lines in this format: `remap=<key>="string"` or `remap=<key>=<key>`, where:
   - "remap" is the command you enter in remap.cfg.
   - "key" is the 4-digit hexadecimal key or keys to which or from which you are remapping.
   - "string" is the new function for the key or keys, which can be a text string, ASCII mnemonic, or other 2-byte hexadecimal code. Enclose the entire string in quotation marks.
5. Save the new file as remap.cfg.
6. Download remap.cfg to drive C: on your computer.

Example 1: Suppose you want to remap "+" on your computer to send a message and then enter a carriage return. In the remap.cfg file, add this command:

```
remap=<002b>="My battery is low."<CR>
```

Example 2: To remap the function of the function keys to another key, replace *string* with the transmitted code for the function and replace *key* with the 4-digit hexadecimal key that will do the function. For example, to remap the [F6] function to the "B" key, add this command to the remap.cfg file:

```
remap=<0042>=<ESC>"[17~"
```

Example 3: This is an example of multiple hexadecimal codes in the right-most argument which makes a key into a text sequence with embedded EHLLAPI values for the [F4] and [F5] keys:

```
remap=<xxxx>="EHLLAPI value"<1034>"EHLLAPI value
2"<1035>"END
```

Creating a Remapping Macro

1. Using any text editor, add the `macro=<key>="string"` Macro command to the end of the remap.cfg file, where:
   - "macro" is the command you enter in remap.cfg.
   - "key" is the 4-digit hexadecimal key or keys you are remapping.
   - "string" is the new action for the key or keys. The string can be a text string, ASCII mnemonic, or other 2-byte hexadecimal code. Enclose the entire string in quotation marks.
2. At the end of the macro, type `runmacro=<key>,` where key is the 4-digit hexadecimal code that identifies the keys that activate the macro.
3. Save the file name as remap.cfg for the macros to work.
4. Append the new remap to the original hex file.
5. Copy remap.cfg to the "C:\" drive on your computer.

Example: Assign the * key to activate a macro which remaps the 1-9 keys and the 0 key to F1-F9 and F10 respectively.

```
macro=<0031>=<1031>
macro=<0032>=<1032>
macro=<0033>=<1033>
macro=<0034>=<1034>
macro=<0035>=<1035>
macro=<0036>=<1036>
macro=<0037>=<1037>
macro=<0038>=<1038>
macro=<0039>=<1039>
macro=<0030>=<1061>
runmacro=<002a>
```

Normally, if the user presses the 1 key the value of "1" is sent to the host. Using this macro, if the user presses the * key and then the "1" key the F1 AID key is sent to the host.

Nesting Macros

Macros do not nest. The right-most argument is processed as key strokes and not scanned for macro values. For example:

```
// swap "3" and "5" keys
remap=<0033>="5"      // map "3" key to a "5" key
remap=<0035>="3"      // map "5" key to a "3" key
```

The “3” key produces a “5” key. If nesting was allowed, the “5” key is recognized as a macro that produces the “3” key and the “3” key is recognized as a “5” key that produces the “7” key, and so forth.

Remapping Keys for Each Session

Use the following syntax to remap keys for each session. The session number can be 1, 2, 3, or 4.

```
remap=Session1<keyval>="string"
Macro=Session1<keyval>="string"
Runmacro=Session1<keyval>
```

Note: The string comparison for the “Session” string is case-sensitive.

Key Code Table

To remap keys to send non-display characters, which have ASCII values of less than 20, see the **“String Code Table” on page 124.**

Note: Values not listed here may work but are not supported.

```
remap=<0020>="string"   /* SPACE key */
remap=<0021>="string"   /* ! key */
remap=<0022>="string"   /* " key */
remap=<0023>="string"   /* # key */
remap=<0024>="string"   /* $ key */
remap=<0025>="string"   /* % key */
remap=<0026>="string"   /* & key */
remap=<0027>="string"   /* ' key */
remap=<0028>="string"   /* ( key */
remap=<0029>="string"   /* ) key */
remap=<002a>="string"   /* * key */
remap=<002b>="string"   /* + key */
remap=<002c>="string"   /* , key */
remap=<002d>="string"   /* - key */
remap=<002e>="string"   /* . key */
remap=<002f>="string"   /* / key */

remap=<0030>="string"   /* 0 key*/
remap=<0031>="string"   /* 1 key*/
remap=<0032>="string"   /* 2 key*/
remap=<0033>="string"   /* 3 key*/
remap=<0034>="string"   /* 4 key*/
remap=<0035>="string"   /* 5 key*/
```

```
remap=<0036>="string"   /* 6 key*/
remap=<0037>="string"   /* 7 key*/
remap=<0038>="string"   /* 8 key*/
remap=<0039>="string"   /* 9 key*/

remap=<003a>="string"   /* : key */
remap=<003b>="string"   /* ; key */
remap=<003c>="string"   /* < key */
remap=<003d>="string"   /* = key */
remap=<003e>="string"   /* > key */
remap=<003f>="string"   /* ? key */
remap=<0040>="string"   /* @ key */

remap=<0041>="string"   /* A key*/
remap=<0042>="string"   /* B key*/
remap=<0043>="string"   /* C key*/
remap=<0044>="string"   /* D key*/
remap=<0045>="string"   /* E key*/
remap=<0046>="string"   /* F key*/
remap=<0047>="string"   /* G key*/
remap=<0048>="string"   /* H key*/
remap=<0049>="string"   /* I key*/
remap=<004a>="string"   /* J key*/
remap=<004b>="string"   /* K key*/
remap=<004c>="string"   /* L key*/
remap=<004d>="string"   /* M key*/
remap=<004e>="string"   /* N key*/
remap=<004f>="string"   /* O key*/
remap=<0050>="string"   /* P key*/
remap=<0051>="string"   /* Q key*/
remap=<0052>="string"   /* R key*/
remap=<0053>="string"   /* S key*/
remap=<0054>="string"   /* T key*/
remap=<0055>="string"   /* U key*/
remap=<0056>="string"   /* V key*/
remap=<0057>="string"   /* W key*/
remap=<0058>="string"   /* X key*/
remap=<0059>="string"   /* Y key*/
remap=<005a>="string"   /* Z key*/

remap=<005b>="string"   /* [ key */
remap=<005c>="string"   /* key */
remap=<005d>="string"   /* ] key */
remap=<005e>="string"   /* ^ key */
remap=<005f>="string"   /* _ key */
remap=<0060>="string"   /* ` key */

remap=<0061>="string"   /* a key*/
remap=<0062>="string"   /* b key*/
remap=<0063>="string"   /* c key*/
remap=<0064>="string"   /* d key*/
remap=<0065>="string"   /* e key*/
remap=<0066>="string"   /* f key*/
remap=<0067>="string"   /* g key*/
remap=<0068>="string"   /* h key*/
remap=<0069>="string"   /* i key*/
remap=<006a>="string"   /* j key*/
remap=<006b>="string"   /* k key*/
remap=<006c>="string"   /* l key*/
remap=<006d>="string"   /* m key*/
```

```
remap=<006e>="string"   /* n key*/
remap=<006f>="string"   /* o key*/
remap=<0070>="string"   /* p key*/
remap=<0071>="string"   /* q key*/
remap=<0072>="string"   /* r key*/
remap=<0073>="string"   /* s key*/
remap=<0074>="string"   /* t key*/
remap=<0075>="string"   /* u key*/
remap=<0076>="string"   /* v key*/
remap=<0077>="string"   /* w key*/
remap=<0078>="string"   /* x key*/
remap=<0079>="string"   /* y key*/
remap=<007a>="string"   /* z key*/

remap=<007b>="string"   /* { key */
remap=<007c>="string"   /* | key */
remap=<007d>="string"   /* } key */
remap=<007e>="string"   /* ~ key */
remap=<007f>="string"   /* Del key */

remap=<1030>="string"   /* Home key */
remap=<1031>="string"   /* F1 key */
remap=<1032>="string"   /* F2 key */
remap=<1033>="string"   /* F3 key */
remap=<1034>="string"   /* F4 key */
remap=<1035>="string"   /* F5 key */
remap=<1036>="string"   /* F6 key */
remap=<1037>="string"   /* F7 key */
remap=<1038>="string"   /* F8 key */
remap=<1039>="string"   /* F9 key */
remap=<103c>="string"   /* Backspace key */

remap=<1061>="string"   /* F10 key */
remap=<1062>="string"   /* F11 key */
remap=<1063>="string"   /* F12 key */
remap=<1064>="string"   /* F13 key */
remap=<1065>="string"   /* F14 key */
remap=<1066>="string"   /* F15 key */
remap=<1067>="string"   /* F16 key */
remap=<1068>="string"   /* F17 key */
remap=<1069>="string"   /* F18 key */
remap=<106a>="string"   /* F19 key */
remap=<106b>="string"   /* F20 key */
remap=<106c>="string"   /* F21 key */
remap=<106d>="string"   /* F22 key */
remap=<106e>="string"   /* F23 key */
remap=<106f>="string"   /* F24 key */
```

3270 Key Codes

```
remap=<1042>="string"   /* Back Tab key */
remap=<1043>="string"   /* Clear key */
remap=<1044>="string"   /* Del key */
remap=<1045>="string"   /* Enter key */
remap=<1046>="string"   /* Erase End of Field (EOF) */
remap=<1049>="string"   /* Insert key */

remap=<104c>="string"   /* Window/viewport left key */
remap=<104e>="string"   /* New line */
remap=<1052>="string"   /* Reset key */
remap=<1054>="string"   /* Tab key */
```

```
remap=<1055>="string"   /* Window/viewport up key */
remap=<1056>="string"   /* Window/viewport down key */
remap=<105a>="string"   /* Window/viewport right key */

remap=<1078>="string"   /* PA1 */
remap=<1079>="string"   /* PA2 */
remap=<107a>="string"   /* PA3 */

remap=<2041>="string"   /* Auto-Login Restart key */
remap=<206c>="string"   /* Menu key */

remap=<304c>="string"   /* Page left key */
remap=<3055>="string"   /* Page up key */
remap=<3056>="string"   /* Page down key */
remap=<305a>="string"   /* Page right key */
```

5250 Key Codes

```
remap=<1042>="string"   /* Back Tab key */
remap=<1043>="string"   /* Clear key */
remap=<1044>="string"   /* Del key */
remap=<1045>="string"   /* Enter key */
remap=<1048>= "string"  /* Help key */
remap=<1049>="string"   /* Insert key */
remap=<104c>="string"   /* Window/viewport left key */
remap=<104e>="string"   /* New Line key */

remap=<1050>="string"   /* Print key */
remap=<1052>="string"   /* Reset key */
remap=<1054>="string"   /* Tab key */
remap=<1055>="string"   /* Window/viewport up key */
remap=<1056>="string"   /* Window/viewport down key */
remap=<105a>="string"   /* Window/viewport right key */

remap=<1075>="string"   /* Roll Up key */
remap=<1076>="string"   /* Roll Down key */

remap=<2041>="string"   /* Auto-Login Restart key */
remap=<206c>="string"   /* Menu key */
remap=<302d>="string"   /* Field minus key */
remap=<302b>="string"   /* Field plus key */

remap=<3045>="string"   /* Field Exit key */
remap=<3046>="string"   /* Erase Input key */
remap=<3048>="string"   /* System request key */
remap=<304c>="string"   /* Page left key */

remap=<3051>="string"   /* Attention key */
remap=<3055>="string"   /* Page up key */
remap=<3056>="string"   /* Page down key */
remap=<3057>="string"   /* Field mark key */
remap=<3058>="string"   /* HEX key */
remap=<305a>="string"   /* Page right key */

remap=<4044>="string"   /*Duplicate key */
```

VT/ANSI Key Codes

```
remap=<1054>="string"   /* Tab key */
remap=<1042>="string"   /* Back Tab key */
remap=<1044>="string"   /* Del key */
remap=<1045>="string"   /* Enter key */
remap=<1049>="string"   /* Insert key */
```

```
remap=<104c>="string"   /* Left key */
remap=<1055>="string"   /* Up key */
remap=<1056>="string"   /* Down key */
remap=<105a>="string"   /* Right key */

remap=<1075>="string"   /* Page up key */
remap=<1076>="string"   /* Page down key */

remap=<2041>="string"   /* Auto-Login Restart key */
remap=<206c>="string"   /* Menu key */

remap=<304c>="string"   /* Window/viewport left key */
remap=<3055>="string"   /* Window/viewport up key */
remap=<3056>="string"   /* Window/viewport down key */
remap=<305a>="string"   /* Window/viewport right key */

remap=<3061>="string"   /* Find key */
remap=<3062>="string"   /* Insert here key */
remap=<3063>="string"   /* Remove key */
remap=<3064>="string"   /* Select key */
remap=<3065>="string"   /* Previous screen key */
remap=<3066>="string"   /* Next screen key */

remap=<3067>="string"   /* Keypad key */
remap=<3068>="string"   /* Keypad Enter key */
remap=<3069>="string"   /* Keypad 0 key */
remap=<306a>="string"   /* Keypad 1 key */
remap=<306b>="string"   /* Keypad 2 key*/
remap=<306c>="string"   /* Keypad 3 key*/
remap=<306d>="string"   /* Keypad 4 key*/
remap=<306e>="string"   /* Keypad 5 key*/
remap=<306f>="string"   /* Keypad 6 key*/
remap=<3070>="string"   /* Keypad 7 key*/
remap=<3071>="string"   /* Keypad 8 key*/
remap=<3072>="string"   /* Keypad 9 key*/
remap=<3073>="string"   /* Keypad . key*/

remap=<3075>="string"   /* Page left key */
remap=<3076>="string"   /* Page right key */

remap=<3077>="string"   /* Keypad - key*/
remap=<3078>="string"   /* Keypad + key*/
```

String Code Table

Keys can be remapped to send non-display characters. To remap a key to send non-display characters, find the ASCII value for that key in the tables above and use the following formatting. More than one non-display value can be included in a single string. For example:

```
remap=<0020>="<STX>5<HT>6<EOT>"
```

remaps the space key to send a Start of Text, a five, a Horizontal Tab, a six, and an End of Text.

```
remap=<0001>="<NUL>"    /* Null */
remap=<0002>="<SOH>"    /* Start of Heading */
remap=<0003>="<STX>"    /* Start of Text */
remap=<0004>="<ETX>"    /* End of Text */
remap=<0005>="<EOT>"    /* End of Transmission */
remap=<0006>="<ENQ>"    /* Enquiry */
remap=<0007>="<ACK>"    /* Acknowledgment */
```

```
remap=<0008>="<BEL>"    /* Bell */
remap=<0009>="<BS>"     /* Backspace */
remap=<000a>="<HT>"     /* Horizontal Tab */
remap=<000b>="<LF>"     /* Line Feed */
remap=<000c>="<VT>"     /* Vertical Tab */
remap=<000d>="<FF>"     /* Form Feed */
remap=<000e>="<CR>"     /* Carriage Return */
remap=<000f>="<SO>"     /* Shift Out */
remap=<0010>="<SI>"     /* Shift In */
remap=<0011>="<DLE>"    /* Data Link Escape */
remap=<0012>="<DC1>"    /* Device Control 1 */
remap=<0013>="<DC2>"    /* Device Control 2 */
remap=<0014>="<DC3>"    /* Device Control 3 */
remap=<0015>="<DC4>"    /* Device Control 4 */
remap=<0016>="<NAK>"    /* Negative Acknowledge */
remap=<0017>="<SYN>"    /* Synchronous Idle */
remap=<0018>="<ETB>"    /* End Transmission Block */
remap=<0019>="<CAN>"    /* Cancel */
remap=<001a>="<EM>"     /* End of Medium */
remap=<001b>="<SUB>"    /* Substitute */
remap=<001c>="<ESC>"    /* Escape */
remap=<001d>="<FS>"     /* File Separator */
remap=<001e>="<GS>"     /* Group Separator */
remap=<001f>="<RS>"     /* Record Separator */
remap=<0020>="<US>"     /* Unit Separator */
```

Remapping Displayed Characters

You can use display character translation files to remap characters as they are written to the display. The translation file name for ITE must be 3270.xlt for 3270, 5250.xlt for 5250, or VT220.xlt for VT/ANSI. For help with downloading the file to the computer, see the computer user's manual.

Display character translation files are binary files consisting of ordered pairs of 8-bit values. Each pair of values remaps a displayable character to a different displayable character:

- The first byte of a pair is the ASCII value of the character to replace.
- The second byte of a pair is the ASCII value that replaces the first.

These translations are made when a character is written to a display device. If the character is sent to the host (as a keystroke or scan data) or sent to an external device such as a printer, it is sent as the original, untranslated value.

Suppose you want a computer running terminal emulation to replace the uppercase B with the Greek letter beta, and replace the uppercase Z with the Greek letter omega. Create an .xlt file that is four bytes long (two ordered pairs of two bytes each). The file should contain the 0x42, 0xE1, 0x5A, and 0xEA bytes in this order. These represent the ASCII display character set values for B, beta, Z, and omega, respectively.

ASCII Equivalents for EBCDIC Values (3270, 5250)

	EBCDIC Value													
Language	**4A**	**4F**	**5A**	**5B**	**5F**	**6A**	**79**	**7B**	**7C**	**7F**	**A1**	**C0**	**D0**	**E0**
English (US)	9B	0E	21	24	AA	7C	60	23	40	22	7E	7B	7D	5C
German	8E	21	9A	24	5E	94	60	23	15	22	E1	84	81	99
Danish/Norwegian	23	21	0F	8F	5E	ED	60	92	05	22	81	91	86	5C
Finnish/Swedish	15	21	0F	8F	5E	7C	82	8E	99	22	81	84	86	90
Italian	F8	21	82	24	5E	95	97	9C	15	22	8D	85	8A	87
Spanish	5B	OE	5D	–	AA	A4	60	A5	40	22	06	7B	7D	5C
French	F8	21	15	24	5E	97	60	9C	85	22	06	82	8A	87
Belgian	5B	21	50	24	5E	97	60	23	85	22	06	82	8A	87
English (UK)	24	OE	21	9C	AA	7C	60	23	40	22	5F	7B	7D	5C

ASCII Equivalents for EBCDIC Values (VT/ANSI)

Characters	Default Display Values
0xA0 to 0xAF	0x20, 0xAD, 0x9B, 0x9C, 0x20, 0x9D, 0x20, 0x15, 0x0F, 0x20, 0xFE, 0xAE, 0x20, 0x20, 0x20, 0x20
0xB0 to 0xBF	0xF9, 0xF1, 0xFD, 0x20, 0x20, 0xE6, 0x20, 0xFA, 0x20, 0x20, 0xA7, 0xAF, 0xAC, 0xAB, 0x20, 0xA8
0xC0 to 0xCF	0x85, 0xA0, 0x83, 0x01, 0x8E, 0x8F, 0x92, 0x80,0x8A, 0x90, 0x88, 0x89, 0x8D, 0xA1, 0x8C, 0x8B
0xD0 to 0xDF	0x20, 0xA5, 0x95, 0xA2, 0x93, 0x03, 0x99, 0x20,0x18, 0x97, 0xA3, 0x96, 0x9A, 0x1F, 0x20, 0xE1
0xE0 to 0xEF	0x85, 0xA0, 0x83, 0x02, 0x84, 0x86, 0x91, 0x87,0x8A, 0x82, 0x88, 0x89, 0x8D, 0xA1, 0x8C, 0x8B
0xF0 to 0xFF	0x20, 0xA4, 0x95, 0xA2, 0x93, 0x03, 0x94, 0x20,0xED, 0x97, 0xA3, 0x96, 0x81, 0x98, 0x20, 0x20

IBM Character Sets

Number	Language	IBM Set
1	English (U.S.)	037-850
2	German	273-850
3	Danish/Norwegian	277-850
4	Swedish/Finnish	278-850
5	Italian	280-850
6	Spanish	284-850
7	French	297-850
8	Belgian	500-850

Example

This example remaps 14 characters appropriate to U.S. English to characters more appropriate to Austrian/German. ASCII hexadecimal file 5250.XLT remaps for German.

0x9B 0x8E
0x0E 0x21
0x21 0x9A
0x24 0x24
0xAA 0x5E
0x7C 0x94
0x60 0x60
0x23 0x23
0x40 0x15
0x22 0x22
0x7E 0xE1
0x7B 0x84
0x7D 0x81
0x5C 0x99

Hex Values and Character Mapping for Example

EBCDIC Hex Value	Original to be Replaced	Replacement for Display
4A	¢	Ä
4F	|	!
5A	!	Ü
5B	$	$
5F	¬	^
6A	¦	ö
79	`	`
7B	#	#
7C	@	§
7F	″	″
A1	~	β
C0	{	ä
D0	}	ü
E0	\	Ö

Implementing ITCColor.dat Attribute Colors

You must name the file ITCColor.dat and you may place this where the other ITE configuration files are placed for discovery by the ITE application.

The color file contains lines defining the color Index and the Color for eight normal foreground (Text) and background (Back) color pairs and eight inverse color pairs for a total of 32 colors. Each line is a maximum of 80 characters. A line can be empty, have leading spaces, have a comment indicated by a semicolon character, have a pair of values (color Index and Color). All characters from a semicolon to the end of the

line are ignored. A line is terminated by a carriage return, line feed character, or both. Invalid lines are ignored. You may define all, none, or any of the colors in the file in any order. The file may exist or not. The normal Text colors and the Inverse Text color are defaulted to black. If an Index-Color is not defined or the file does not exist, default colors are used.

The color Index is a decimal value of 0 through 31. It specifies the character attributes associated with Color. The index values are documented in the sample ITCColor.dat file on the next page.

Color is a 32-bit hex value used to specify an RGB color (0x00bbggrr). In RGB format, the low-order (rr) byte contains a value for the relative intensity of red; the second byte (gg) contains a value for green; and the third byte (bb) contains a value for blue. The high-order byte must be zero. The maximum value for a single byte is 0xFF.

Sample Color File

```
Column   1         2         3         4         5         6         7
12345678901234567890123456789012345678901234567890123456789012345678901234567890
=================================================================================
  ; comment
; Normal
00 0x00000000   ;Text
01 0x007f7f7f   ;Back
02 0x000000ff   ;Text   Bold
03 0x007f7f00   ;Back   Bold
04 0x0000ff00   ;Text   Blink
05 0x007f007f   ;Back   Blink
06 0x0000ffff   ;Text   Bold    Blink
07 0x007f0000   ;Back   Bold    Blink
08 0x00ff0000   ;Text   Underline
09 0x00007f7f   ;Back   Underline
10 0x00ff00ff   ;Text   Bold    Underline
11 0x00007f00   ;Back   Bold    Underline
12 0x00ffff00   ;Text   Blink   Underline
13 0x0000007f   ;Back   Blink   Underline
14 0x00ffffff   ;Text   Bold    Blink   Underline
15 0x00000000   ;Back   Bold    Blink   Underline

; Inverse
16 0x00000000   ;Text
17 0x00ffffff   ;Back
18 0x0000007f   ;Text   Bold
19 0x00ffff00   ;Back   Bold
20 0x00007f00   ;Text   Blink
21 0x00ff00ff   ;Back   Blink
22 0x00007f7f   ;Text   Bold    Blink
23 0x00ff0000   ;Back   Bold    Blink
24 0x007f0000   ;Text   Underline
25 0x0000ffff   ;Back   Underline
26 0x007f007f   ;Text   Bold    Underline
27 0x0000ff00   ;Back   Bold    Underline
28 0x007f7f00   ;Text   Blink   Underline
29 0x000000ff   ;Back   Blink   Underline
30 0x007f7f7f   ;Text   Bold    Blink   Underline
31 0x007ffff7   ;Back   Bold    Blink   Underline
```

Customizing 5250 EBCDIC to ASCII Translation

The 5250 data stream translates all data from the host from 8-bit EBCDIC to 8-bit ASCII for processing in the computer. Before the data is sent back to the host, it is again translated from ASCII to EBCDIC. The default translation is shown on the next page.

You can customize the operation of the 5250 data stream by changing the default EBCDIC to ASCII translation table. You can replace the default table with one that is combined with the HEX file that you download to the computer. You can use ASEBTBLD.exe to create the file. You must name it ASCEBD.tbl.

Type `asebtbld` to display this information:

```
ASEBTBLD ASCII-EBCDIC Translation Table Creation.
$Revision: 1.0 $
$Date: 03 Apr 1998 13:46:14 $
Copyright 1995, Norand Corporation.
Usage: ASEBTBLD [<options>] <commands> <fname>
    <options>:
    -r<file>    Input file containing replacement table type,
                0x00-0xff table index, 0x00-0xff value.
    -v          Verbose * display processing steps.
    <fname>           Output file name, extension ignored.
```

ASEBTBLD creates <fname>.TBL from the default ASCII and EBCDIC tables using replacement values specified in -r<file>. Type the following command to create the ASCEBD.tbl file, with the replacement values specified in changes.my:

```
asebtbld -rchanges.my ascebd
```

The replacement file is an ASCII text file formatted as follows:

```
----------top of replacement file----------
/* Any line beginning with '/*' in column 1 is a comment.
/* A=ASCII=>EBCDIC
/* E=EBCDIC=>ASCII

/* ASCII  Index   ValueAnything after 'Value' is a comment
/* A      0x30    0xF0ASCII '0' returns EBCDIC '0'
/* E      0xF0    0x30EBCDIC '0' returns ASCII '0'
/* E      0xC9    0x3FUnknown EBCDIC 0xC9 returns ASCII '?'

/* Any number of blanks and tabs are allowed before, between
/* and after values. Blank lines are allowed.
----------bottom of replacement file----------
```

ASEBTBLD creates the default tables starting on the next page if there is no replacement file, or if an empty replacement file is specified.

Displaying EBCDIC Non-English Code Pages

If you have selected a code page other than the default English, you need to perform these steps to ensure the associated EBCDIC is displayed correctly.

To display non-English code pages

1. Find the appropriate EBCDIC code and the ASCII code page.
2. Check for a default translation in the EBCDIC to ASCII table.

3 If there is a translation, verify whether you have the correct ASCII character for the code page you had selected.

4 If there is no translation, add an entry to the changes.my file.

5 Do this process for every character that needs translation.

6 When all of the characters are translated, save the changes.my file.

7 Run the asebtbld application as described on the previous page.

Example: If you had selected the Turkish code page (ASCII code page 1026) and you want to display the EBCDIC code page 1254 for Turkey, look up character 0x42. This character shows that the default EBCDIC to ASCII translation is 0x00 (no default translation). Searching the ASCII code page 1026 reveals the 0xe2 character, which you add to the changes.my file as follows.

```
E 0x42 0xe2
```

Code Page 01026 HEX Digits

1st > 2nd v	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0	(SP)	&	-	ø	Ø	º		¢	ç		ü	0
-1	(RSP)	é	/	É	a	j	ö	£	A	J	÷	1
-2	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
-3	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
-4	à	è	À	È	d	m	u	©	D	M	U	4
-5	á	í	Á	Í	e	n	v	§	E	N	U	5
-6	ã	î	Ã	Î	f	o	w	◖	F	O	W	6
-7	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
-8	{	ì	[	Ì	h	q	y	½	H	Q	Y	8
-9	ñ	ß	Ñ		i	r	z	¾	I	R	Z	9
-A	Ç			:	«	ä	¡	¬	-	1	2	3
-B	.	|	,	Ö	»	ö	¿	|	ô	û	Ô	Û
-C	<	*	%		}	æ	]	-	~	\	#	¨
-D	(	)	_	·	`	,	$	¨	ò	ù	Ò	Ù
-E	+	;	>	=	|	Æ	@	′	ó	ú	Ó	Ú
-F	!	^	?	Ü	±	≠	®	×	õ	ÿ	Õ	(EO)

Code Page 01254 Windows Turkish HEX Digits

1st> 2nd v	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0			(SP)	0	@	P	`	p	_		(RSP)	°	À		à	
-1			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
-2			¨	2	B	R	b	r	,	′	¢	2	Â	Ò	â	ô
-3			#	3	C	S	c	s		«	£	3	Ã	Ó	ã	ó
-4			$	4	D	T	d	t	″	″	≠	′	Ä	Ô	ä	ô
-5			%	5	E	U	e	u	...	²	¥		Å	Õ	å	õ

Code Page 01254 Windows Turkish HEX Digits (continued)

1st> 2nd v	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-6			&	6	F	V	f	v		-	|	¶	Æ	Ö	æ	ö
-7				7	G	W	g	w		–	§	·	Ç	×	ç	÷
-8			(	8	H	X	h	x	^	~	¨	,	È	Ø	è	ø
-9			)	9	I	Y	i	y		t	E	1	É	Ù	é	ù
-A			*	:	J	Z	j	z					Ê	Ú	ê	ú
-B			+	;	K	[	k	{	<	>	«	»	Ë	Û	ë	û
-C			,	<	L		1	|			¬	¼	Ì	Û	ì	û
-D			-	=	M	]	m	}			-	½	Í	Ü	í	ü
-E			.	>	N	^	n	~			®	¾	Î		î	
-F			/	?	O	_	o				-	¿	Ï	ß	ï	ÿ

ASCII to EBCDIC

0x00

0x00	0x01	0x02	0x03	0x37	0x2d	0x2e	0x2f
0x16	0x05	0x25	0x0b	0x0c	0x0d	0x4f	0x0f
0x10	0x11	0x12	0x13	0x3c	0x00	0x32	0x1c
0x18	0x19	0x3f	0x27	0x22	0x00	0x35	0x00

0x20

0x40	0x5a	0x7f	0x7b	0x5b	0x6c	0x50	0x7d
0x4d	0x5d	0x5c	0x4e	0x6b	0x60	0x4b	0x61
0xf0	0xf1	0xf2	0xf3	0xf4	0xf5	0xf6	0xf7
0xf8	0xf9	0x7a	0x5e	0x4c	0x7e	0x6e	0x6f

0x40

0x7c	0xc1	0xc2	0xc3	0xc4	0xc5	0xc6	0xc7
0xc8	0xc9	0xd1	0xd2	0xd3	0xd4	0xd5	0xd6
0xd7	0xd8	0xd9	0xe2	0xe3	0xe4	0xe5	0xe6
0xe7	0xe8	0xe9	0xad	0xe0	0xbd	0x6a	0x6d

0x60

0x79	0x81	0x82	0x83	0x84	0x85	0x86	0x87
0x88	0x89	0x91	0x92	0x93	0x94	0x95	0x96
0x97	0x98	0x99	0xa2	0xa3	0xa4	0xa5	0xa6
0xa7	0xa8	0xa9	0xc0	0x6a	0xd0	0xa1	0x07

0x80

0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x4a	0x00	0x00	0x00	0x00

0xa0

0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x5f	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0xad	0x9d	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0xbc

0xc0

0xab	0x8c	0x8b	0x8d	0xbf	0x8e	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0xbb	0xac	0x00	0x00	0x00	0x00	0x00

0xe0

0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00

EBCDIC to ASCII

0x00

0x00	0x01	0x02	0x03	0x00	0x09	0x00	0x7F
0x00	0x00	0x00	0x0B	0x0C	0x0D	0x0E	0x0F
0x10	0x11	0x12	0x13	0x00	0x00	0x08	0x00
0x18	0x19	0x00	0x00	A_DUP	0x00	0x00	0x00

0x20

0x00	0x00	0x1C	0x00	0x00	0x0A	0x17	0x1B
0x00	0x00	0x00	0x00	0x00	0x05	0x06	0x07
0x00	0x00	0x16	0x00	0x00	0x1E	0x00	0x04
0x00	0x00	0x00	0x00	0x14	0x16	0x00	0x1A

0x40

0x20	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x9b	0x2E	0x3C	0x28	0x2B	0x0e
0x26	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x21	0x24	0x2A	0x29	0x3B	0xaa

0x60

0x2D	0x2F	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x7C	0x2C	0x25	0x5F	0x3E	0x3F
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x60	0x3A	0x23	0x40	0x27	0x3D	0x22

0x80

0x00	0x61	0x62	0x63	0x64	0x65	0x66	0x67
0x68	0x69	0x00	0xc2	0xc1	0xc3	0xc5	0x00
0x00	0x6A	0x6B	0x6C	0x6D	0x6E	0x6F	0x70
0x71	0x72	0x00	0x00	0x00	0xb4	0x00	0x00

0xa0

0x00	0x7E	0x73	0x74	0x75	0x76	0x77	0x78
0x79	0x7A	0x00	0xc0	0xda	0xb3	0x00	0x00
0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
0x00	0x00	0x00	0xd9	0xbf	0x00	0x00	0xc4

0xc0

0x7B	0x41	0x42	0x43	0x44	0x45	0x46	0x47
0x48	0x49	0x00	0x00	0x00	0x00	0x00	0x00
0x7D	0x4A	0x4B	0x4C	0x4D	0x4E	0x4F	0x50
0x51	0x52	0x00	0x00	0x00	0x00	0x00	0x00

0xe0

0x5c	0x00	0x53	0x54	0x55	0x56	0x57	0x58
0x59	0x5A	0x00	0x00	0x00	0x00	0x00	0x00
0x30	0x31	0x32	0x33	0x34	0x35	0x36	0x37
0x38	0x39	0x00	0x00	x00	0x00	0x00	0x00

A

Bar Code Scanning

This appendix includes bar codes you can scan while using the Intermec Terminal Emulator, keypress information for configuring preambles and postambles, and information on using Encoded Code 39. This appendix includes these sections:

- **Scanning Bar Codes While Using ITE**
- **Preamble and Postamble**
- **Encoded Code 39**

Scanning Bar Codes While Using ITE

To scan these bar codes, configure the computer to use Code 39 in Full ASCII mode using one of these methods:

- Use the Intermec Settings application on the computer to enable Code 39 in Full ASCII mode. For help with Intermec Settings, see the computer user's manual.
- Configure ITE symbology settings to enable Code 39 in Full ASCII mode. For help, see **"Configuring Bar Code Symbology Options" on page 39.**

Paging Keys

Page up

%PGUP

Page down

%PGDN

Page right

%PGRT

Page left

%PGLT

Cursor Keys

Window/Viewport up (up one line)

%UP

Window/Viewport down (down one line)

%DN

Window/Viewport right (right one character)

%RT

Window/Viewport left (left one character)

%LF

Tab Keys

Back Tab

%BTAB

Forward Tab

$I

Opening ITE Configuration Menus

ITE configuration menus

%TECFG

Auto-Login Restart

Auto-Login Restart

%ALRS

3278 SNA Keys

Cursor Home (Home)

%Hm

Delete (Del)

%DEL

EOF

%EOF

Erase Input (Clr)

%EINP

Insert

%INS

New Line (Return)

%NL

Reset

%RST

AID-Generating or Top-Row Function Keys

Clear - 3270, 5250

%CLR

Enter - 3270, 5250

$M

F1 - 3270, 5250, VT220/320

%F1

F2 - 3270, 5250, VT220/320

%F2

F3 - 3270, 5250, VT220/320

%F3

F4 - 3270, 5250, VT220/320

%F4

F5 - 3270, 5250, VT220/320

%F5

F6 - 3270, 5250, VT220/320

%F6

F7 - 3270, 5250, VT220/320

%F7

F8 - 3270, 5250, VT220/320

%F8

F9 - 3270, 5250, VT220/320

%F9

F10 - 3270, 5250, VT220/320

%F10

F11 - 3270, 5250, VT100, VT220/320

%F11

F12 - 3270, 5250, VT100, VT220/320

%F12

F13 - 3270, 5250, VT100, VT220/320

%F13

F14 - 3270, 5250, VT220/320

%F14

F15 - 3270, 5250, VT220/320

%F15

F16 - 3270, 5250, VT220/320

%F16

F17 - 3270, 5250, VT220/320

%F17

F18 - 3270, 5250, VT220/320

%F18

F19 - 3270, 5250, VT220/320

%F19

F20 - 3270, 5250, VT220/320

%F20

Note: For VT/ANSI, scan the following F21 bar code label to toggle between Line Edit (block) mode and Character mode:

F21 - 3270, 5250, VT/ANSI

%F21

F22 - 3270, 5250

%F22

F23 - 3270, 5250

%F23

F24 - 3270, 5250

%F24

PA1 - 3270

%PA1

PA2 - 3270

%PA2

PA3 - 3270

%PA3

Help (nonerror state) - 5250

%HELP

Print - 5250

%PRINT

Record Backspace (Home) - 5250

%Hm

Roll Down - 5250

%RODN

Roll Up - 5250

%ROUP

Symbols - 3270, 5250

Cent (¢)

%CENT

Not (¬)

%NOT

Field Exit Key - 5250

Field Exit

%FLDX

Signal Keys - 5250

Attn

%ATTN

Help (from error state)

%HELP

Special Control Keys - 5250

Delete (Del)

%DEL

Erase Input

%EINP

Error Reset

%ERR

Hex

%HEX

Insert

%INS

Special Host Key - 5250

Sys Req

%SYSR

5250 Additional Functions

Dup (duplicate enabled fields only)

%DUP

Field-

%FLD-

Field+

%FLD+

Field Mark

%FM

New Line

%NL

Special Function Keys - VT/ANSI

Backspace

%BKSP

Delete (Del)

%DEL

Editing Keys - VT/220/320

Find

%FIND

Insert

%INS

Next Screen

%NEXT

Previous Screen

%PREV

Remove

%REM

Select

%SEL

Preamble and Postamble

When you set the preamble or postamble for a bar code symbology, there are special values that ITE interprets to generate the expected key stroke.

Preamble and Postamble

Key	Wedge Amble	Wedge Amble (Windows Mobile 5.0)	API Amble
F1	0x70	0xa0 0x70	N/A
F2	0x71	0xa0 0x71	N/A
F3	0x72	0xa0 0x72	N/A
F4	0x73	0xa0 0x73	N/A
F5	0x74	0xa0 0x74	N/A
F6	0x75	0xa0 0x75	N/A
F7	0x76	0xa0 0x76	N/A
F8	0x77	0xa0 0x77	N/A
F9	0x78	0xa0 0x78	N/A
F10	0x79	0xa0 0x79	0xea
F11	0x7a	0xe8	N/A
F12	0x7b	0xa0 0x7b	N/A
F13	0x7c	0xa0 0x7c	N/A
F14	0x7d	0xa0 0x7d	N/A
F15	0x7e	0xa0 0x7e	N/A
F16	0x7f	0xa0 0x7f	N/A
F17	0x80	0xa0 0x80	N/A
F18	0x81	0xa0 0x81	N/A
F19	0x82	0xa0 0x82	N/A
F20	0x83	0xa0 0x83	N/A
F21	0x84	0xa0 0x84	N/A
F22	0x85	0xa0 0x85	N/A
F23	0x86	0xa0 0x86	N/A
F24	0x87	0xa0 0x87	N/A
Enter	0x0d	0x0d	0x0d
BackTab	0x0a	0x0a	0xdc
Bell	0x07	0x07	0x07
Field Exit	0xfa	0xfa ‡	0x9a
Field+	0x93	0x93	N/A
Field-	0x94	0x94	N/A

‡**Note**: For the CN3 computer only, the wedge amble is 0x95

Encoded Code 39

The following table lists escape characters and key press sequences for Encoded Code 39. The "(t)" in the table indicates a terminating key. Any bar code data following this key code is ignored. The "t" sequences, therefore, should be located only at the end of the bar code. If you attempt to use an invalid sequence (termed "reserved" in the table) the computer beeps and the data stream is flushed.

Note: For 5250 emulation, when Encoded Code 39 is enabled, a Field Exit is generated when the last scanned character is a data character (0 >= char <= 255).

Key Press Sequences for Encoded Code 39

Sequence	Key	Sequence	Key
$space (VT/ANSI)	Find (t)	+space (VT/ANSI)	09 hexadecimal (t)
$- (VT/ANSI)	Insert here (t)	+- (VT/ANSI)	0A hexadecimal (t)
$. (VT/ANSI)	Remove (t)	+. (VT/ANSI)	0B hexadecimal (t)
$0 (VT/ANSI)	Keypad 0 (t)	+0 (VT/ANSI)	0C hexadecimal (t)
$1 (VT/ANSI)	Keypad 1 (t)	+1 (VT/ANSI)	0D hexadecimal (t)
$2 (VT/ANSI)	Keypad 2 (t)	+2 (VT/ANSI)	0E hexadecimal (t)
$3 (VT/ANSI)	Keypad 3 (t)	+3 (VT/ANSI)	0F hexadecimal (t)
$4 (VT/ANSI)	Keypad 4 (t)	+4 (VT/ANSI)	10 hexadecimal (t)
$5 (VT/ANSI)	Keypad 5 (t)	+5 (VT/ANSI)	11 hexadecimal (t)
$6 (VT/ANSI)	Keypad 6 (t)	+6 (VT/ANSI)	12 hexadecimal (t)
$7 (VT/ANSI)	Keypad 7 (t)	+7 (VT/ANSI)	13 hexadecimal (t)
$8 (VT/ANSI)	Keypad 8 (t)	+8 (VT/ANSI)	14 hexadecimal (t)
$9 (VT/ANSI)	Keypad 9 (t)	+9 (VT/ANSI)	15 hexadecimal (t)
$A	New Line (3270, 5250, VT/ANSI)	+A	a
$B	Delete (t)	+B	b
$C	Forward Tab (t)	+C	c
$D	Forward Tab (t)	+D	d
$E	Back Tab (3270, 5250)	+E	e
$F	Roll Up/Page Down (5250)	+F	f
$G	Roll Down/Page Up (5250)	+G	g
$H	Backspace (t)	+H	h
$I	Field + (5250)	+I	i
$J	Field - (5250)	+J	j
$K	Insert (3270, 5250)	+K	k
$L	Home (3270, 5250)	+L	l
$M	Enter (t) (3270, VT/ANSI) or Enter/Rec Adv (t) (5250)	+M	m
$N	Erase (3270) or Field Exit (5250)	+N	n
$O	Clear (3270) or Erase Input (5250)	+O	o
$P	Attn (5250)	+P	p

Key Press Sequences for Encoded Code 39 (continued)

Sequence	Key	Sequence	Key
$Q	PF1 (t) (3270, VT/ANSI) or F1 (t) (5250)	+Q	q
$R	PF2 (t) (3270, VT/ANSI) or F2 (t) (5250)	+R	r
$S	PF3 (t) (3270, VT/ANSI) or F3 (t) (5250)	+S	s
$T	PF4 (t) (3270, VT/ANSI) or F4 (t) (5250)	+T	t
$U	F5 (t) (5250, VT/ANSI) or PF5 (3270)	+U	u
$V	F6 (t) (5250, VT/ANSI) or PF6 (3270)	+V	v
$W	F7 (t) (5250, VT/ANSI) or PF7 (3270)	+W	w
$X	F8 (t) (5250, VT/ANSI) or PF8 (3270)	+X	x
$Y	F9 (t) (5250, VT/ANSI) or PF9 (3270)	+Y	y
$Z	F10 (t) (5250, VT/ANSI) or PF10 (3270)	+Z	z
%space (VT/ANSI)	Select (t)	/space (VT/ANSI)	16 hexadecimal (t)
%- (VT/ANSI)	Previous screen (t)	/- (VT/ANSI)	17 hexadecimal (t)
%. (VT/ANSI)	Next screen (t)	/. (VT/ANSI)	18 hexadecimal (t)
%0 (VT/ANSI)	Enter (t)	/0 (VT/ANSI)	19 hexadecimal (t)
%1 (VT/ANSI)	00 hexadecimal (t)	/1 (VT/ANSI)	1A hexadecimal (t)
%2 (VT/ANSI)	01 hexadecimal (t)	/2 (VT/ANSI)	1B hexadecimal (t)
%3 (VT/ANSI)	02 hexadecimal (t)	/3 (VT/ANSI)	1C hexadecimal (t)
%4 (VT/ANSI)	03 hexadecimal (t)	/4 (VT/ANSI)	1D hexadecimal (t)
%5 (VT/ANSI)	04 hexadecimal (t)	/5 (VT/ANSI)	1E hexadecimal (t)
%6 (VT/ANSI)	05 hexadecimal (t)	/6 (VT/ANSI)	1F hexadecimal (t)
%7 (VT/ANSI)	06 hexadecimal (t)	/7 (VT/ANSI)	Reserved
%8 (VT/ANSI)	07 hexadecimal (t)	/8 (VT/ANSI)	Reserved
%9 (VT/ANSI)	08 hexadecimal (t)	/9 (VT/ANSI)	Reserved
%A	Clear AID (t) (3270) or Clear (5250)	/A	! (exclamation mark)
%B	F11 (t) (5250, VT/ANSI) or PF11 (3270)	/B	" (double quote)
%C	F12 (t) (5250, VT/ANSI) or PF12 (3270)	/C	# (pound)
%D	PA1 (3270) or Error Reset (5250)	/D	$ (dollar)
%E	PA2 (3270) or Help (5250)	/E	% (percent)
(None)	PA3 (3270)		
%F	; (semicolon)	/F	& (ampersand)
%G	< (less than)	/G	' (single quote)
%H	= (equal)	/H	((left parenthesis)
%I	> (greater than)	/I	) (right parenthesis)
%J	? (question mark)	/J	* (asterisk)
%K	[(left brace) (3270, VT/ANSI) or ¬ (not symbol) (5250)	/K	+ (plus)
%L	\ (backslash)	/L	, (comma)
%M	] (right brace) (3270, VT/ANSI) or ¢ (cent) (5250)	/M	- (hyphen)
%N	^ (circumflex) (3270, VT/ANSI) or ¦ (piping symbol) (5250)	/N	F14 (t)
%O	_ (underscore)	/O	/ (forward slash)
%P	{ (left brace)	/P	F15 (t)

Key Press Sequences for Encoded Code 39 (continued)

Sequence	Key	Sequence	Key
%Q	| (vertical bar or pipe)	/Q	F16 (t)
%R	} (right brace)	/R	F17 (t)
%S	~ (tilde)	/S	F18 (t)
%T	Keyboard delete (t)	/T	F19 (t)
%U	Dup (5250)	/U	F20 (t)
%V	@ (at)	/V	F21 (3270, 5250)
%W	ι (grave accent)	/W	F22 (3270, 5250)
%X	Sys Req (5250)	/X	F23 (3270, 5250)
%Y	Print (5250)	/Y	F24 (3270, 5250)
%Z	F13 (t) (5250, VT/ANSI) or PF13 (3270)	/Z	: (colon)

Terminating Keys

Terminating keys are the nonprintable ASCII sequences and action keys. When the computer finds them in a bar code, an action is taken, and the computer sends the data in the buffer to the host computer. Terminating keys should appear only at the end of the bar code. If they are located in the middle of a bar code, they are executed normally, but the data following them in the bar code is ignored. Terminating keys cause a computer-to-base station transmission. The computer ignores data in the bar code buffer following these keys once a transmission takes place.

For example, the computer interprets the following sequence:

123$V456

as

123F6

The computer will not send "456" to the host computer because it follows the terminating key **F6**.

ASCII sequences can be used any time before a terminating key. For example, the computer interprets:

+H+E+L+L+O$M

as

hello<Enter>

Escape Characters

The four escape characters in the previous table yield a VT220 data stream key press equivalent when followed by another character. The escape characters are:
$ (dollar sign)
% (percent)
+ (plus)
/ (forward slash)

For example:

- If a bar code contains the sequence "%U" somewhere within it, the computer converts this sequence to an [ENTER] key and processes it as soon as encountered in the scanning buffer.
- "+B" is converted to the lower case "b."
- "%B" is converted to an F11 key press.

If you want the Encoded Code 39 option but the bar codes to be scanned already contain the "$," "%," "+," or "/," character, then each place where these characters occur must be expanded to a special "/" sequence:

- Every bar code where the "$" is maintained must be expanded to a "/D" sequence.
- Percent signs (%) must be expanded to "/E".
- Forward slashes (/) must be expanded to the letter "/O".
- Plus signs (+) must be expanded to "/K".

Overriding Auto Tab Scan and Auto Enter Scan (3270)

When the computer is in **Auto Entr Scan** or **Auto Tab Scan** mode, eight Encoded Code 39 functions override these modes when they are scanned.

- Forward Tab and Back Tab
- End of Field and Home
- Backspace and Insert
- Clear and Delete

These codes are all of the screen-editing type, where an automatic [Enter] is not desired. The listed encoded operations never allow an Auto Entr Scan to occur. For example, if Auto Entr Scan was enabled and a "$C" (forward tab) was scanned, the computer forward tabs to the next field, but does not perform an [Enter], even though the Auto Entr Scan feature is enabled. In this case, the encoded forward tab overrides the Auto Entr Scan mode. However, if a "+D" is scanned, the computer places the letter "d" at the current cursor location and the Auto Entr Scan mode then executes an [Enter].

B

Using the Computer Keypad

This appendix lists keypresses for ITE functionality for computers that support ITE, and includes these topics:

- **About ITE and Computer Keypads**
- **About the Soft Input Panels**
- **Using the CK3 Keypads**
- **Using the CK32 Keypads**
- **Using the CK61 Keypads**
- **Using the CN3, CN3e, CN4, and CN4e Keypads**
- **Using the CV30 Keypads**

About ITE and Computer Keypads

Intermec computers include keypad overlays specific to using Intermec Terminal Emulator. This section lists keypresses for ITE functionality.

For more information on using the keypad on your Intermec computer, see the computer user's manual.

About the Soft Input Panels

While ITE is running, tap T in the Toolbar. The SIP appears.

Tap T to toggle between showing and hiding the SIP.

Note: For computers using Windows Mobile, if the SIP is onscreen and you press a key on the physical keypad, the SIP closes and the ITE application goes to full screen.

When the SIP is displayed, you can use it for entering characters or accessing options as follows:

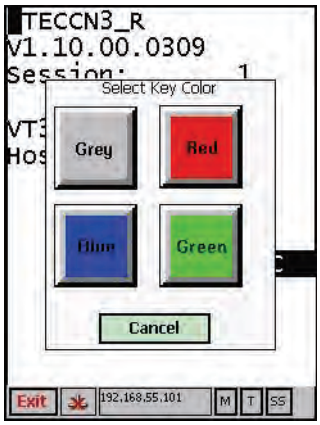
- Tap Mn on the Shifted keypad to get to the ITE configuration menus.
- Tap Shift to toggle between the Default and Shifted keypads.
- Tap ↘ to toggle between the Function Toggled and Default keypads.
- Tap Cap to use uppercase keys with numbers.
- Tap Cap, then Shift to use lowercase keys with shifted characters.
- Tap ↘ Autolog to enter Auto-Login Restart.
- Tap ↘ Mode to toggle between Line Edit (block) mode and Character mode.

Changing the SIP Key Color

Up to ten SIP keys can be changed to red, green, or blue. You can also change them back to the default gray.

To change the color of a SIP key

1. Press and hold the left **Shift** key. The key color reverses. When the key color reverts to normal, release the key.
2. Press and hold the right **Shift** key. The key color reverses. When the key color reverts to normal, release the key.
3. Tap the key you want to change. The Select Key Color screen appears.



4. Tap the desired color. The SIP key changes to the selected color.

Creating Custom SIPs

You can create a custom SIP with the Intermec SIP Designer application. See its online help for instructions on installing the custom SIP to your computer. Contact your Intermec representative for more information.

To switch SIPs

- Follow the procedure described in **"Configuring Keyboard Options" on page 80.**

3270 Keypads

Default Keypad

Shifted Keypad

Function Toggled Keypad

Caps Locked Keypad

Caps Locked + Shifted Keypad

5250 Keypads

Default Keypad

Shifted Keypad

Function Toggled Keypad

Att Clr F1 F2 F3 F4 F5 F6 Ins R↑ R↓
SR ErI F7 F8 F9 F10 F11 F12
Prt Hlp Hm
F- F+ F13 F14 F15 F16 F17 F18
Autolog F19 F20 F21 F22 F23 F24 Dup F→

Caps Locked Keypad

Caps Locked + Shifted Keypad

VT/ANSI Keypads

Default Keypad

Shifted Keypad

Function Toggled Keypad

Caps Locked Keypad

Caps Locked + Shifted Keypad

About the SIP Keys

This section describes how to use the SIPs when running ITE. The SIPs function the same way for all computers.

Note: The key sequences described here begin with the Default keypad.

Cursor and Paging Keys

	3270/5250	VT/ANSI
To Move	**Tap the SIP Keys**	**Tap the SIP Keys**
Window/viewport up		
Window/viewport down		
Window/viewport right		
Window/viewport left		
Page up		
Page down		
Page right		
Page left		
Host cursor up	N/A	
Host cursor down	N/A	
Host cursor right	N/A	
Host cursor left	N/A	

Alphanumeric and Symbol Keys

To Enter	Tap the SIP Key
a through z	**a** through **z**
A through Z	Shift **A** through Shift **Z**
0 through 9	**0** through **9**
Symbols	Symbol key, or Shift plus corresponding key.

Function and Auxiliary Keys

To Enter	Tap the SIP Key
Back Tab	Shift B.T.
Ctrl	Ctrl (VT/ANSI only)
Forward Tab	Tab
Caps Lock	Cap
Return	Enter
Shift	Shift
Space bar	Space

Function and Auxiliary Keys (continued)

To Enter	Tap the SIP Key
Clear	⇘ Clear (3270, 5250 only)
PA1	⇘ PA1 (3270 only)
PA2	⇘ PA2 (3270 only)
PA3	⇘ PA3 (3270 only)
F1 through F20	⇘ F1 through ⇘ F20
F21	⇘ F21 (3270, 5250 only)
F22	⇘ F22 (3270, 5250 only)
F23	⇘ F23 (3270, 5250 only)
F24	⇘ F24 (3270, 5250 only)

Editing Keys

To Enter	3270	5250	VT/ANSI
E-Inp	⇘ **E-Inp**	⇘ **Erl**	N/A
Clr	N/A	⇘ **Clr**	N/A
Del	⇘ Del	⇘ Del	⇘ Del
Enter	Enter	Enter	Enter
EOF	⇘ EOF	N/A	N/A
Home	⇘ Hm	⇘ Hm	N/A
Insert	⇘ Ins	⇘ Ins	⇘ Insert
New Line (Return)	NewLn	⇘ N.L.	N/A
Reset	Reset	Reset	N/A
Find	N/A	N/A	⇘ Find
Insert here	N/A	N/A	⇘ Insert
Next screen	N/A	N/A	⇘ NextSc
Prev screen	N/A	N/A	⇘ PrevSc
Remove	N/A	N/A	⇘ Remove
Select	N/A	N/A	⇘ Select

3270, 5250 Field Exit Characters

To Enter	Tap the SIP Key
Field Exit	F→

5250 Keys and Functions

To Enter	Tap the SIP Keys
Attn	⇘ Att

5250 Keys and Functions (continued)

To Enter	Tap the SIP Keys
Help (from error state)	⅄ Hlp
Sys Req	⅄ SR
¬ (Not symbol)	Shift ¬
Dup (duplicate enabled fields only)	⅄ Dup
Field-	⅄ F-
Field+	⅄ F+
Field Mark	Not supported
Hex	Hex

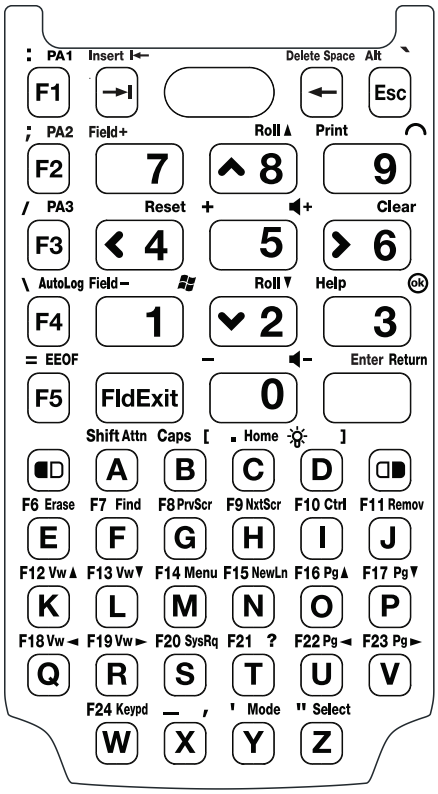
VT/ANSI Control Keys

To Enter	Tap the SIP Keys	To Enter	Tap the SIP Keys
SOH	Ctrl **A**	DC1, X-ON	Ctrl **Q**
STX	Ctrl **B**	DC2	Ctrl **R**
ETX	Ctrl **C**	DC3, X-OFF	Ctrl **S**
EOT	Ctrl **D**	DC4	Ctrl **T**
ENQ	Ctrl **E**	NAK	Ctrl **U**
ACK	Ctrl **F**	SYN	Ctrl **V**
BEL	Ctrl **G**	ETB	Ctrl **W**
BS	Ctrl **H**	CAN	Ctrl **X**
HT	Ctrl **I**	EM	Ctrl **Y**
LF	Ctrl **J**	SUB	Ctrl **Z**
VT	Ctrl **K**	ESC	**Esc**
FF	Ctrl **L**	FS	Ctrl **1**
CR	Ctrl **M**	GS	Ctrl **2**
SO	Ctrl **N**	RS	Ctrl **3**
SI	Ctrl **O**	US	Ctrl **4**
DLE	Ctrl **P**	NUL	Ctrl **5**
		DEL	Shift Del

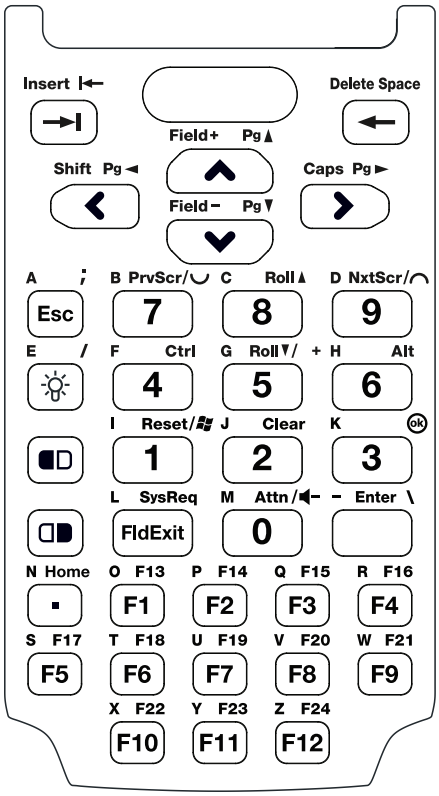
Additional Functions

To Enter	Tap the SIP Keys
Access TE configuration menus	Shift Mn
VT/ANSI Transmission Mode: Toggle between Line Edit (block) and Character mode	⅄ Mode

Using the CK3 Keypads


PA1 Insert Delete Space Alt
F1 Esc
PA2 Field+ Roll▲ Print
F2 7 8 9
PA3 Reset + Clear
F3 4 5 6
AutoLog Field− Roll▼ Help
F4 1 2 3
EEOF Enter Return
F5 FldExit 0
Shift Attn Caps [Home]
A B C D
F6 Erase F7 Find F8 PrvScr F9 NxtScr F10 Ctrl F11 Remov
E F G H I J
F12 Vw▲ F13 Vw▼ F14 Menu F15 NewLn F16 Pg▲ F17 Pg▼
K L M N O P
F18 Vw◄ F19 Vw► F20 SysRq F21 ? F22 Pg◄ F23 Pg►
Q R S T U V
F24 Keypd _ , ' Mode " Select
W X Y Z

CK3 Alphabetic Keypad


Insert Delete Space
Field+ Pg▲
Shift Pg◄ Caps Pg►
Field− Pg▼
A ; B PrvScr/ C Roll▲ D NxtScr/
Esc 7 8 9
E / F Ctrl G Roll▼/ + H Alt
4 5 6
I Reset/ J Clear K
1 2 3
L SysReq M Attn/ − Enter \
FldExit 0
N Home O F13 P F14 Q F15 R F16
F1 F2 F3 F4
S F17 T F18 U F19 V F20 W F21
F5 F6 F7 F8 F9
X F22 Y F23 Z F24
F10 F11 F12

CK3 Numeric Keypad

Special characters and functions printed above the keys are color-coded to correspond with the matching shift keys.

CK3 Shift Keys

Shift Key	Function
[Orange]	Press plus a key to type a character or do an operation printed in orange on the overlay.
[Green]	Press plus a key to type a character or do an operation printed in green on the overlay.

For more information on basic keypresses for the CK3, see the *CK3 Mobile Computer User's Manual*.

CK3 Function Keys

Function	Alphanumeric Keypad	Numeric Keypad
Back Tab		
Backspace		
Caps Lock		

CK3 Function Keys (continued)

Function	Alphanumeric Keypad	Numeric Keypad
Forward Tab	Tab	Tab
Return	Fn Enter	NA
Shift	Fn A	Fn ←
Space	Fn ←	Fn ←
F1 through F5	F1 through F5	F1 through F5
F6	Fn E	F6
F7	Fn F	F7
F8	Fn G	F8
F9	Fn H	F9
F10	Fn I	F10
F11	Fn J	F11
F12	Fn K	F12
F13	Fn L	Fn F1
F14	Fn M	Fn F2
F15	Fn N	Fn F3
F16	Fn O	Fn F4
F17	Fn P	Fn F5
F18	Fn Q	Fn F6
F19	Fn R	Fn F7
F20	Fn S	Fn F8
F21	Fn T	Fn F9
F22	Fn U	Fn F10
F23	Fn V	Fn F11
F24	Fn W	Fn F12

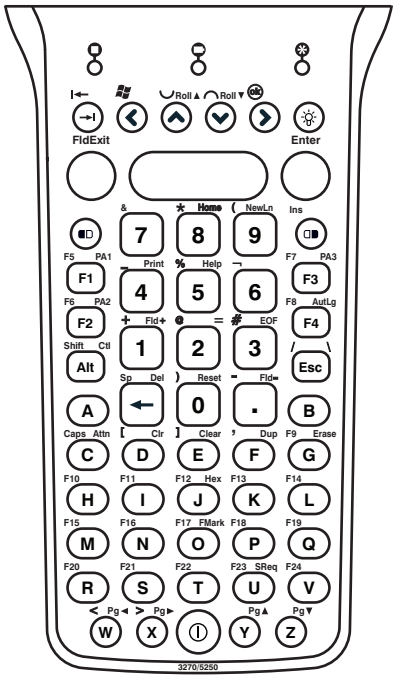
CK3 5250 Emulation

Function	Alphanumeric Keypad	Numeric Keypad
Roll Down	Fn 2	Fn 2
Reset	Fn 4	Fn 4
Clear	Fn 6	Fn 6
Roll Up	Fn 8	Fn 8
Home	Fn C	Fn .

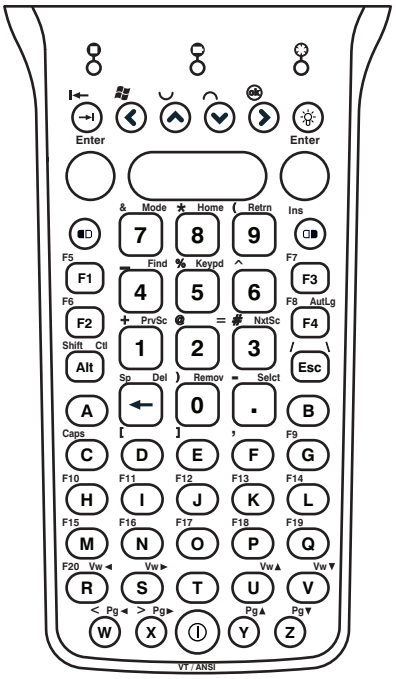
CK3 ITE Functions

Function	Alphanumeric Keypad	Numeric Keypad
Field Exit	FldExit	FldExit
System Request	Blue S	Blue FldExit
Home	Blue C	Blue .
Attention	Blue A	Blue 0
Reset	Blue 4	Blue 1
Clear	Blue 6	Blue 2
Roll Down	Blue 2	Blue 5
Previous Screen	Blue G	Blue 7
Roll Up	Blue 8	Blue 8
Next Screen	Blue H	Blue 9
Page Left	Blue U	Blue ‹
Page Up	Blue O	Blue ^
Page Down	Blue P	Blue v
Page Right	Blue V	Blue ›
Field +	Green 7	Green ^
Field -	Green 1	Green v

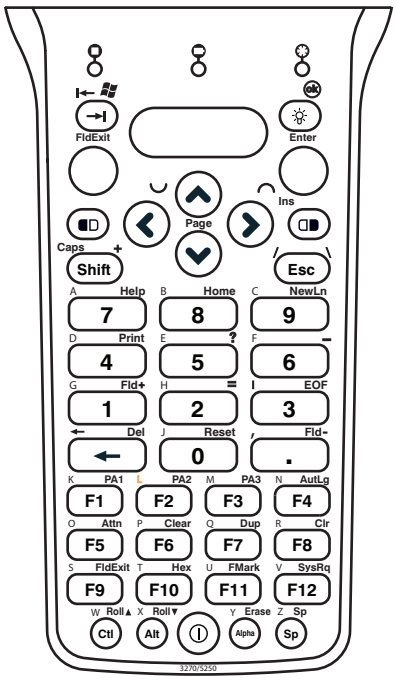
Using the CK32 Keypads



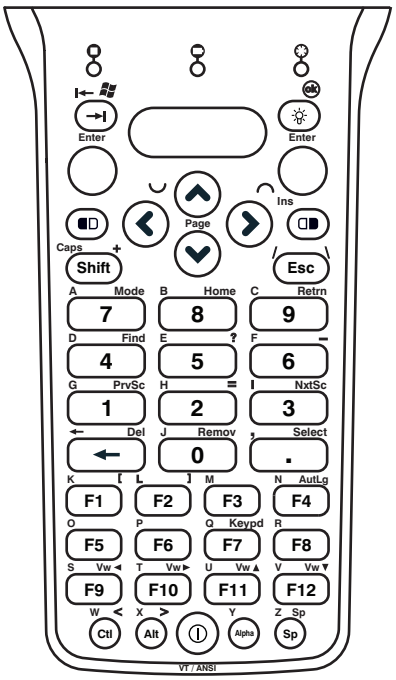
CK32 56-Key Keypad for 3270/5250



CK32 56-Key Keypad for VT/ANSI



CK32 42-Key Keypad for 3270/5250



CK32 42-Key Keypad for VT/ANSI

Characters on the CK32 Keypads

The special characters and functions printed above the keys are color-coded to correspond with the matching shift keys.

CK32 Shift Keys

Shift Key	Function
[Orange] ◧	Press ◧ plus a key to type a character or perform an operation printed in orange on the overlay. Press ◧ twice in a row to lock the orange state. Press ◧ a third time to cancel the lock state. The left LED indicator is lit when the shift state is active.
[Green] ◨	Press ◨ plus a key to type a character or do an operation printed in green on the overlay. Press ◨ twice in a row to lock the green state. Press ◨ a third time to cancel the lock state. The right LED indicator is lit when the shift state is active.
Alpha	Press the Alpha key on the 42-key keypad when you want to type several alpha characters printed in orange on the overlay. Press ◧ or ◨ to cancel the Alpha lock state. There is no visual indicator for this mode.

CK32 Symbol and Special Character Keys

To Enter	56-Key Keypad	42-Key Keypad
! (exclamation)	**Shift** 1	**Shift** 1
@ (at)	**Shift** 2	**Shift** 2
# (number)	**Shift** 3	**Shift** 3
$ (dollar)	**Shift** 4	**Shift** 4
% (percent)	**Shift** 5	**Shift** 5
^ (caret)	**Shift** 6 (VT/ANSI only)	**Shift** 6 (VT/ANSI only)
¬ (not)	**Shift** 6 (3270, 5250)	**Shift** 6 (3270, 5250)
& (ampersand)	**Shift** 7	**Shift** 7
* (asterisk)	**Shift** 8	**Shift** 8
((left parenthesis)	**Shift** 9	**Shift** 9
) (right parenthesis)	**Shift** 0	**Shift** 0
- (dash)	◧ .	◨ 6
_ (underscore)	◧ 4	**Shift** ◨ 6
= (equal)	◨ 2	◨ 2
+ (plus)	◧ 1	◨ **Shift**
, (comma)	◧ F	N/A
. (period)	.	. or ◧ .
? (question)	N/A	◨ F7 (VT/ANSI) ◨ 5 (3270, 5250)
/ (forward slash)	◧ Esc	◧ Esc

CK32 Symbol and Special Character Keys (continued)

To Enter	56-Key Keypad	42-Key Keypad
\ (back slash)	Alt Esc	Alt Esc
[(left square bracket)	Ctl D	Alt F1 (VT/ANSI only)
] (right square bracket)	Ctl E	Alt F2 (VT/ANSI only)
< (less than)	Ctl W	Alt **Ctl** (VT/ANSI only)
> (greater than)	Ctl X	Alt **Alt** (VT/ANSI only)

CK32 Special Keys

To Enter	56-Key Keypad	42-Key Keypad
Caps Lock	Ctl C	Ctl **Shift**
Shift	Ctl **Alt**	**Shift**
Forward Tab	Tab	Tab
Back Tab	Ctl Tab	Ctl Tab
Space bar	Ctl ←	**Sp** or Alt **Sp**
Back Space	←	← or Ctl L
Delete	Alt ←	Alt ←
Auto-Login Restart	Alt F4	Alt F4
ITE setup menu	**Alt** M	**Alt** F3

Note: To enable the F13 to F24 keys on the 42-key keypad, see **"Configuring Keyboard Options" on page 80.**

CK32 AID-Generating Function Keys

To Enter	56-Key Keypad	42-Key Keypad
F1	F1	F1
F2	F2	F2
F3	F3	F3
F4	F4	F4
F5	Ctl F1	F5
F6	Ctl F2	F6
F7	Ctl F3	F7
F8	Ctl F4	F8
F9	Ctl G	F9
F10	Ctl H	F10
F11	Ctl I	F11
F12	Ctl J	F12

CK32 AID-Generating Function Keys (continued)

To Enter	56-Key Keypad	42-Key Keypad
F13	Blue K	Shift F1
F14	Blue L	Shift F2
F15	Blue M	Shift F3
F16	Blue N	Shift F1
F17	Blue O	Shift F5
F18	Blue P	Shift F6
F19	Blue Q	Shift F7
F20	Blue R	Shift F8
F21	Blue S	Shift F9
F22	Blue T	Shift F10
F23	Blue U	Shift F11
F24	Blue V	Shift F12

CK32 Keypads for 3270 and 5250 Emulations

The CK32 has either a 56-key or a 42-key keypad.

CK32 Cursor Keys in 3270 and 5250 Emulations

To Enter	56-Key Keypad	42-Key Keypad
Window/viewport up	Up arrow	Up arrow
Window/viewport down	Down arrow	Down arrow
Window/viewport right	Right arrow	Right arrow
Window/viewport left	Left arrow	Left arrow

CK32 Paging Keys in 3270 and 5250 Emulations

To Enter	56-Key Keypad	42-Key Keypad
Page up	Orange Y	Orange Up arrow
Page down	Orange Z	Orange Down arrow
Page right	Orange X	Orange Right arrow
Page left	Orange W	Orange Left arrow

CK32 Additional AID Keys in 3270 and 5250 Emulations

To Enter	56-Key Keypad	42-Key Keypad
Attention	Orange C	Orange F5
Clear (5250 only)	Orange E	Orange F6
Field Exit (5250 only)	Left blue-encircled key	Left blue-encircled key

CK32 Additional AID Keys in 3270 and 5250 Emulations (continued)

To Enter	56-Key Keypad	42-Key Keypad
Help	Alt 5	Alt 7
Home (Record Backspace)	Alt 8	Alt 8
PA1 (3270 only)	Alt F1	Alt F1
PA2 (3270 only)	Alt F2	Alt F2
PA3 (3270 only)	Alt F3	Alt F3
Print	Alt 4	Alt 4
Roll Down	Alt ⌄	Alt **Alt**
Roll Up	Alt ⌃	Alt **Ctl**
Enter	Right blue-encircled key	Right blue-encircled key

CK32 Control Keys in 3270 and 5250 Emulations

To Enter	56-Key Keypad	42-Key Keypad
Clr (3270 only)	Alt D	Alt F8
Dup	Alt F	Alt F7
EOF (3270 only)	Alt 3	Alt 3
Erase Input (5250 only)	Alt G	Alt **Alpha**
Error Reset	Alt 0	Alt 0
Field Exit	Left blue-encircled key	Left blue-encircled key
Field Mark (3270 only)	Alt O	Alt F11
Field Minus	Alt .	Alt .
Field Plus	Alt 1	Alt 1
Hex	Alt J	Alt F10
Insert	Alt Alt	Alt Alt
New Line (3270 only)	Alt 9	Alt 9
System Request	Alt U	Alt F12

CK32 Keypads for VT/ANSI Terminal Emulation

The CK32 has either a 56-key or a 42-key keypad.

CK32 Paging Keys in VT/ANSI Emulation

To Enter	56-Key Keypad	42-Key Keypad
Page up	Alt Y	Alt ⌃
Page down	Alt Z	Alt ⌄
Page right	Alt X	Alt ›
Page left	Alt W	Alt ‹

CK32 Transmission Mode Keys in VT/ANSI Emulation

To Enter	56-Key Keypad	42-Key Keypad
Toggle Character and Block (Line Edit) modes	Blue 7	Blue 7
Keypad mode (must be application enabled)	Blue F7	Blue 5

CK32 Editing Keys in VT/ANSI Emulation

To Enter	56-Key Keypad	42-Key Keypad
Find	Blue 4	Blue 4
Insert	Orange Blue	Orange Blue
Next screen	Blue 3	Blue 3
Prev screen	Blue 1	Blue 1
Remove	Blue 0	Blue 0
Select	Blue .	Blue .
Return	Right or left blue-encircled key	Right or left blue-encircled key

CK32 Cursor Keys in VT/ANSI Emulation

To Enter	56-Key	42-Key
Window/viewport up	Blue Z	Orange F11
Window/viewport down	Orange V	Orange F12
Window/viewport right	Orange S	Orange F10
Window/viewport left	Orange R	Orange F9
Host cursor up key	↑	↑
Host cursor down key	↓	↓
Host cursor right key	→	→
Host cursor left key	←	←

CK32 Control Keys in VT/ANSI Emulation

To Enter	56-Key Keypad	42-Key Keypad
SOH (Start Of Heading)	Blue **Alt** A	**Ctl** A
STX (Start of Text)	Blue **Alt** B	**Ctl** B
ETX (End of Text)	Blue **Alt** C	**Ctl** C
EOT (End Of Transmission)	Blue **Alt** D	**Ctl** D
ENQ (Enquiry)	Blue **Alt** E	**Ctl** E
ACK (Acknowledge)	Blue **Alt** F	**Ctl** F
BEL (Bell)	Blue **Alt** G	**Ctl** G
BS (Backspace)	Blue **Alt** H	**Ctl** H
HT (Horizontal Tab)	Blue **Alt** I	**Ctl** I
LF (Line Feed)	Blue **Alt** J	**Ctl** J

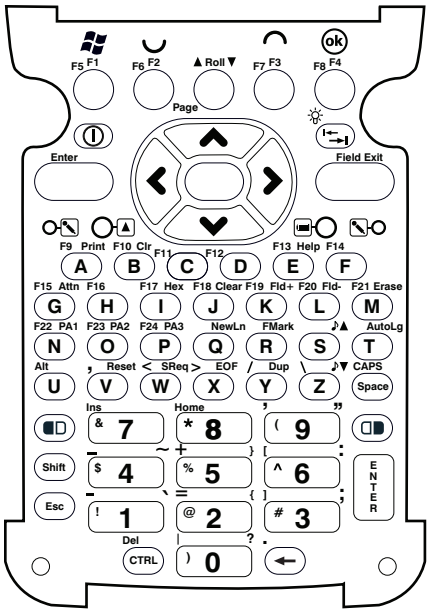
CK32 Control Keys in VT/ANSI Emulation (continued)

To Enter	56-Key Keypad	42-Key Keypad
VT (Vertical Tab)	Alt K	Ctl K
FF (Form Feed)	Alt L	Ctl L
CR (Carriage Return)	Alt M	Ctl M
SO (Shift Out)	Alt N	Ctl N
SI (Shift In)	Alt O	Ctl O
DLE (Data Link Escape)	Alt P	Ctl P
DC1,XON (Device Control 1)	Alt Q	Ctl Q
DC2 (Device Control 3)	Alt R	Ctl R
DC3,XOFF (Device Control 3)	Alt S	Ctl S
DC4 (Device Control 4)	Alt T	Ctl T
NAK (Negative Acknowledge)	Alt U	Ctl U
SYN (Synchronous Idle)	Alt V	Ctl V
ETB (End Transmission Block)	Alt W	Ctl W
CAN (Cancel)	Alt X	Ctl X
EM (End of Medium)	Alt Y	Ctl Y
SUB (Substitute)	Alt Z	Ctl Z
FS (File Separator)	Alt 1	Ctl 1
GS (Group Separator)	Alt 2	Ctl 2
RS (Record Separator)	Alt 3	Ctl 3
US (Unit Separator)	Alt 4	Ctl 4
NUL (Null)	Alt 5	Ctl 5

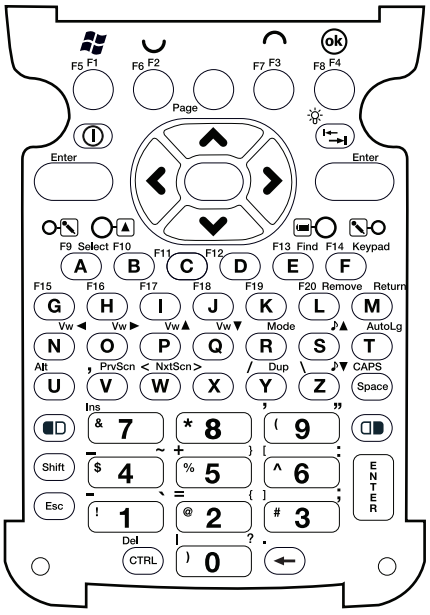
CK32 SIP Auto-Login Restart

To enter Auto-Login Restart, press Alt F4. You can also scan the Auto-Login Restart bar code. For a copy of this bar code, see **"Auto-Login Restart" on page 137.**

Using the CK61 Keypads


F5 F1
F6 F2
▲ Roll ▼
F7 F3
F8 F4
ok
Page
Enter
Field Exit
F9 Print F10 Clr F11 F12 F13 Help F14
A B C D E F
F15 Attn F16 F17 Hex F18 Clear F19 Fld+ F20 Fld- F21 Erase
G H I J K L M
F22 PA1 F23 PA2 F24 PA3 NewLn FMark ♪▲ AutoLg
N O P Q R S T
Alt , Reset < SReq > EOF / Dup \ ♪▼ CAPS
U V W X Y Z Space
Ins Home
& 7 * 8 (9
Shift $ 4 % 5 ^ 6
Esc ! 1 @ 2 # 3
Del
CTRL) 0
ENTER

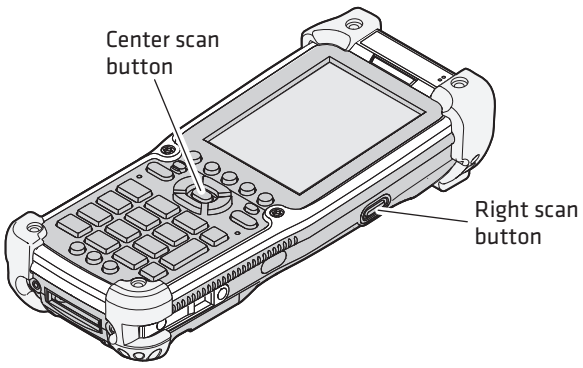
CK61 5250 Keypad


F5 F1
F6 F2
F7 F3
F8 F4
ok
Page
Enter
Enter
F9 Select F10 F11 F12 F13 Find F14 Keypad
A B C D E F
F15 F16 F17 F18 F19 F20 Remove Return
G H I J K L M
Vw ◄ Vw ► Vw▲ Vw▼ Mode ♪▲ AutoLg
N O P Q R S T
Alt , PrvScn < NxtScn > / Dup \ ♪▼ CAPS
U V W X Y Z Space
Ins
& 7 * 8 (9
Shift $ 4 % 5 ^ 6
Esc ! 1 @ 2 # 3
Del
CTRL) 0
ENTER

CK61 VT/ANSI Keypad

CK61 Scan Buttons

ITE remaps the CK61 scan buttons as shown in the next illustration.



Characters on the CK61 Keypads

The special characters and functions printed above the keys are color-coded to correspond with the matching shift keys.

CK61 Shift Keys

Shift Key	Function
[Orange]	Press plus a key to type a character or do an operation printed in orange on the overlay.
[Green]	Press plus a key to type a character or do an operation printed in green on the overlay.

For more information on basic keypresses, see:

- the *CK61 Mobile Computer with Windows Mobile User's Manual*.
- the *CK61 Mobile Computer with Windows CE User's Manual*.

CK61 Cursor and Paging Keys

To Move	3270/5250	VT/ANSI
Window/viewport up	↑	Fn P
Window/viewport down	↓	Fn Q
Window/viewport right	→	Fn O
Window/viewport left	←	Fn N
Page up	Alt ↑	Alt ↑
Page down	Alt ↓	Alt ↓
Page right	Alt →	Alt →
Page left	Alt ←	Alt ←
Host cursor up	N/A	↑
Host cursor down	N/A	↓
Host cursor right	N/A	→
Host cursor left	N/A	←

CK61 Function and Editing Keys

To Enter	Press	To Enter	Press
Back Tab	**Shift** Tab	Del	Alt **Ctl**
Ctrl	**Ctl**	Enter	Enter
Forward Tab	Tab	EOF	Fn X
Caps Lock	Alt Space	Home	Alt 8
Return	Fn M	Insert	Alt 7
Shift	**Shift**	New Line (Return)	Fn Q
Space bar	Space	Reset	Fn V
Clear	Fn J	Find	Fn E
PA1	Fn N	Insert here	Alt 7
PA2	Fn O	Next screen	Fn W
PA3	Fn P	Prev screen	Fn V
E-Inp	Fn M	Remove	Fn L
Clr	Fn B	Select	Fn A

Note: For 3270 and 5250, pressing Esc also performs a Reset.

CK61 Auxiliary Keys

To Enter	Press	To Enter	Press
- (hyphen)	Blue 1	F9	Blue A
, (comma)	Blue V	F10	Blue B
. (period)	Blue ←	F11	Blue C
_ (underscore)	Blue 4	F12	Blue D
F1	F1	F13	Blue E
F2	F2	F14	Blue F
F3	F3	F15	Blue G
F4	F4	F16	Blue H
F5	Blue F1	F17	Blue I
F6	Blue F2	F18	Blue J
F7	Blue F3	F19	Blue K
F8	Blue F4	F20	Blue L
For 3270 and 5250 computers:			
F21	Blue M	F23	Blue O
F22	Blue N	F24	Blue P

CK61 Auto-Login Restart

To enter Auto-Login Restart, press Blue T on the 58-key keypad, or scan the Auto-Login Restart bar code. For a copy of this bar code, see **"Auto-Login Restart" on page 137.**

CK61 3270, 5250 Field Exit Characters

To Enter	Press
Field Exit	Right blue button

CK61 5250 Signal Keys

To Enter	Press
Attn	Blue G
Help *(from error state)*	Blue E

CK61 5250 Special Host Keys

To Enter	Press
Sys Req	Blue W

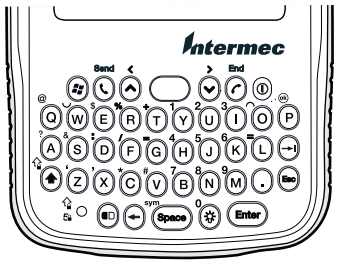
CK61 5250 Additional Functions

To Enter	Press
¬ (Not symbol)	**Shift** 6
Dup (duplicate enabled fields only)	Y
Field-	L
Field+	K
Field Mark	Not supported
Hex	1

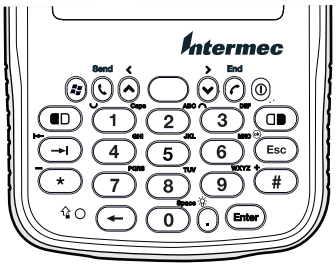
CK61 VT/ANSI Control Keys

To Enter	Press	To Enter	Press
SOH	**Ctl** A	DC1, X-ON	**Ctl** Q
STX	**Ctl** B	DC2	**Ctl** R
ETX	**Ctl** C	DC3, X-OFF	**Ctl** S
EOT	**Ctl** D	DC4	**Ctl** T
ENQ	**Ctl** E	NAK	**Ctl** U
ACK	**Ctl** F	SYN	**Ctl** V
BEL	**Ctl** G	ETB	**Ctl** W
BS	**Ctl** H	CAN	**Ctl** X
HT	**Ctl** I	EM	**Ctl** Y
LF	**Ctl** J	SUB	**Ctl** Z
VT	**Ctl** K	ESC	Esc
FF	**Ctl** L	FS	**Ctl** 1
CR	**Ctl** M	GS	**Ctl** 2
SO	**Ctl** -N	RS	**Ctl** 3
SI	**Ctl** O	US	**Ctl** 4
DLE	**Ctl** P	NUL	**Ctl** 5
		DEL	**Shift** then **Del**

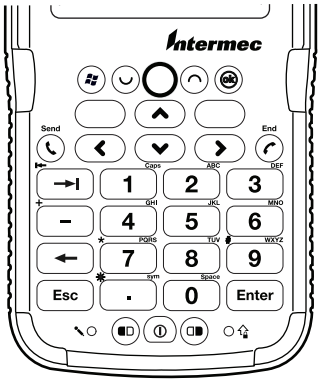
Using the CN3, CN3e, CN4, and CN4e Keypads



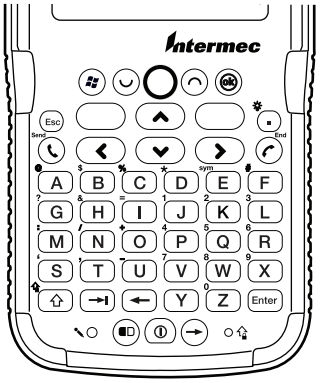
CN3 and CN4 QWERTY Keypad



CN3 and CN4 Numeric Keypad



CN3e and CN4e Numeric Phone-Style Keypad



CN3e and CN4e Alphanumeric Keypad

Characters on the CN3 and CN4 Keypads

There are two color-coded modifier keys on the numeric keypad: the orange key and the green key. The QWERTY and alphanumeric keypads have only the orange color-coded modifier key.

Using the Color-Coded Keys

You Want To:	Press:	Example
Use an orange character or function printed above a key.	key (LED illuminates) and then the key with the character or function printed above it (LED turns off).	On the QWERTY keypad, press and then **Q** to type the @ character.
Use a green character or function printed above a key.	key (LED illuminates) and then the key with the character or function printed above it (LED turns off).	On the numeric keypad, press and then **2** to type a lowercase a.
Lock the orange or green key to stay on.	or twice.	On the numeric keypad, press twice and the green LED illuminates and stays on.
Unlock a green or orange key.	or once.	Press the or once to unlock the key and turn off the LED.

For more information on basic keypresses, see:

- the *CN3 Mobile Computer User's Manual for Windows Mobile 5.0*.
- the *CN3 Mobile Computer User's Manual for Windows Mobile 6.1*.
- the *CN4 Mobile Computer User's Manual*.

Note: For 3270 and 5250 emulations, pressing Esc on the keypad also performs the Reset function.

CN3 and CN4 Special Keys

The **Orange** key, the **Green** key, and the **Shift** keys are toggle keys; once pressed, they remain on until pressed again to turn them off.

CN3 and CN4 Special Keys

To Enter	Numeric Keypad	QWERTY Keypad	Alphabetic Keypad
^ (caret)	N/A	N/A	Shift Orange R
@ (ampersand)	N/A	Orange Q	Orange A
& (and)	N/A	Orange S	Orange H
* (asterisk)	N/A	Orange C	Orange D
: (colon)	N/A	Orange D	Orange M
, (comma)	N/A	Orange X	Orange T
$ (dollar)	N/A	Orange E	Orange B
" (double quote)	N/A	Shift Orange Z	Shift Orange S
! (exclamation)	N/A	Shift Orange 1	Shift Orange J
> (greater than)	N/A	Shift Orange .	Shift .
- (hyphen)	Orange *	Orange G	Shift U
((left parentheses)	N/A	Shift Orange 9	Shift Orange X
< (less than)	N/A	Shift Orange X	Shift Orange T
% (percent)	N/A	Orange R	Shift Orange C
. (period)	.	.	.
+ (plus)	Orange #	Orange T	Orange O
# (pound)	N/A	Orange V	Orange F
? (question mark)	N/A	Orange A	Orange G
) (right parentheses)	N/A	Shift Orange ☼	Shift Orange Z
'(single quote)	N/A	Orange Z	Orange S
_ (underscore)	N/A	Shift Orange G	Shift Orange U
BackTab	Orange →	Orange →	Orange →

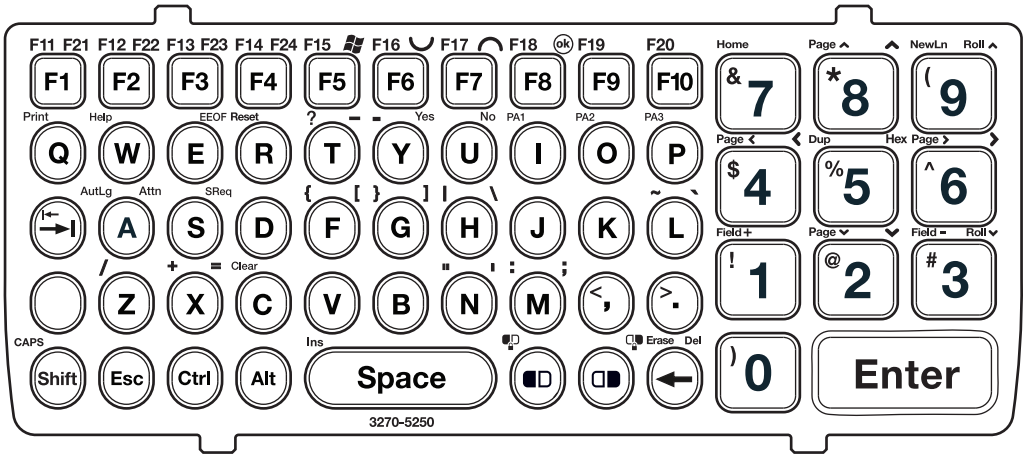
CN3 and CN4 Special Keys (continued)

To Enter	Numeric Keypad	QWERTY Keypad	Alphabetic Keypad
CapsLock	Blue 1	Blue Shift	Blue Shift
Enter	Enter	Enter	Enter
Application Softkey 2	Blue 3	Blue O	Alpha
ok	Blue Esc	Blue P	ok
Shift	Blue	Shift	Shift
Application Softkey 1	Blue 1	Blue W	Orange
Space	Blue 0	Space	Space

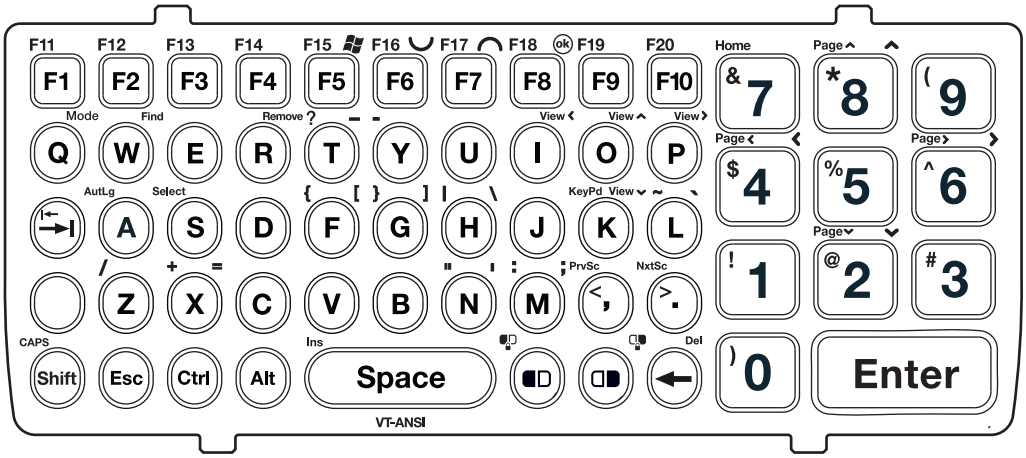
Note: In 3270, 5250, or Native modes, for the F11 through F24 keys press either the uppercase sequence or the lowercase sequence (separated by the "or" conjunction), but not both.

In VT/ANSI mode, for the F11 through F20 keys press either the uppercase sequence or the lowercase sequence (separated by the "or" conjunction), but not both.

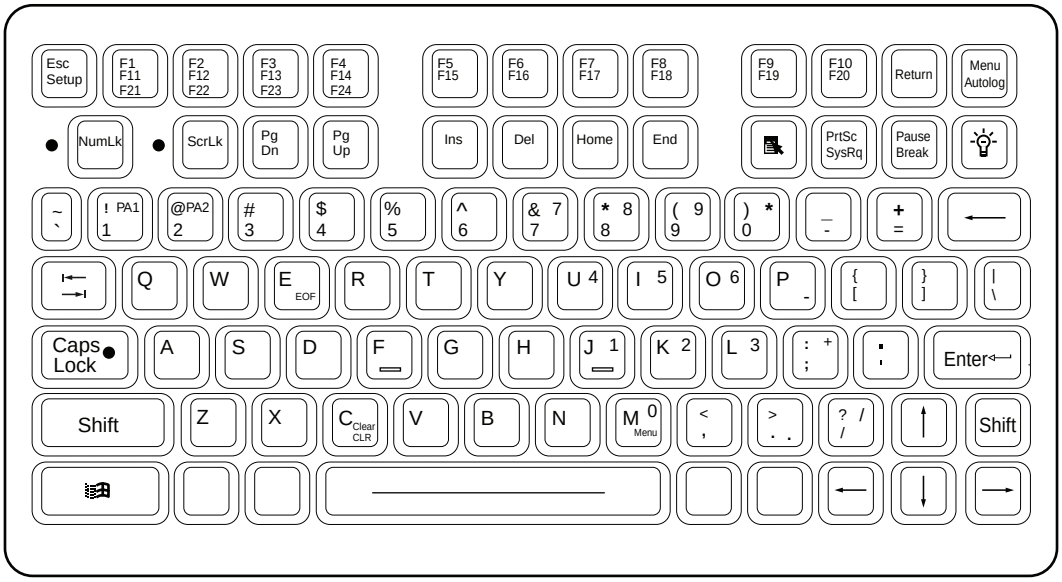
Using the CV30 Keypads


F11 F21 F12 F22 F13 F23 F14 F24 F15 F16 F17 F18 F19 F20
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10
Home Page NewLn Roll
Print Help EEOF Reset Yes No PA1 PA2 PA3
Page Dup Hex Page
AutLg Attn SReq
Field+ Field- Roll
Clear
CAPS Ins Erase Del
Shift Esc Ctrl Alt Space Enter
3270-5250

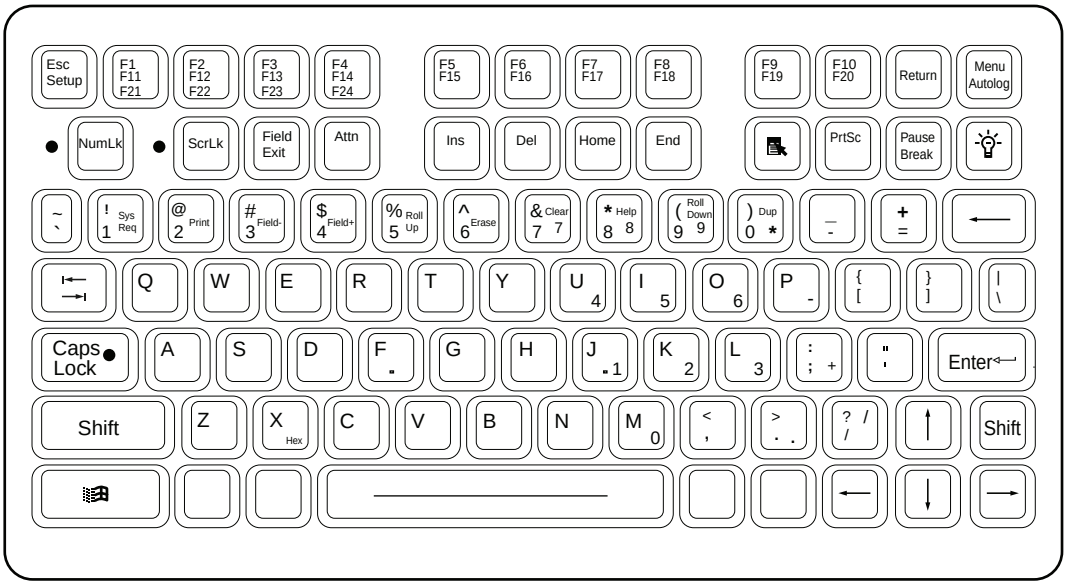
3270 and 5250 Compact Keypad (P/N VE011-8040-A0)


F11 F12 F13 F14 F15 F16 F17 F18 F19 F20
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10
Mode Find Remove View View View
Q W E R T Y U I O P
AutLg Select KeyPd View PrvSc NxtSc
A S D F G H J K L
Z X C V B N M
CAPS Ins Del
Shift Esc Ctrl Alt Space
VT-ANSI
Home Page Page Page Page
7 8 9
4 5 6
1 2 3
0 Enter

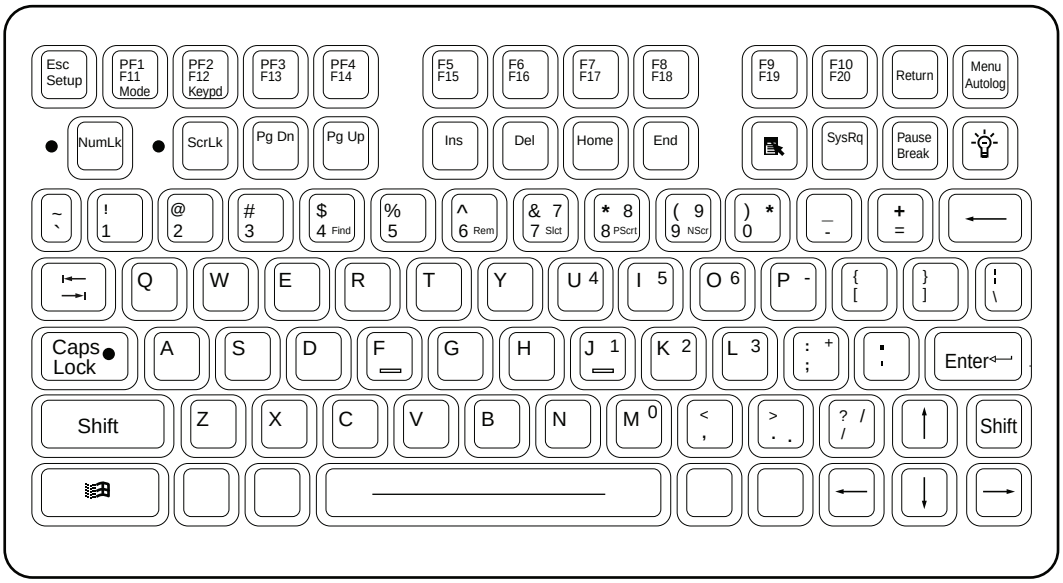
VT/ANSI Compact Keypad (P/N VE011-8041-A0)



3270 Rugged QWERTY Keypad (P/N 340-054-001)



5250 Rugged QWERTY Keypad (P/N 340-054-002)



VT/ANSI Rugged QWERTY Keypad (P/N 340-054-004)

Characters on the CV30 Keypads

The special characters and functions printed above the keys are color-coded to correspond with the matching shift keys.

CV30 Shift Keys

Shift Key	Function
[Orange]	Press plus a key to type a character or do an operation printed in orange on the overlay.
[Green]	Press plus a key to type a character or do an operation printed in green on the overlay.

CV30 Cursor Alphanumeric Keys

	Compact Keypads		Rugged Keypads	
To Enter	**3270/5250**	**VT/ANSI**	**3270/5250**	**VT/ANSI**
Window/viewport up	Alt 8	Alt O	↑	**Blue**, then ↑
Window/viewport down	Alt 2	Alt K	↓	**Blue**, then ↓
Window/viewport right	Alt 6	Alt P	→	**Blue**, then →
Window/viewport left	Alt 4	Alt I	←	**Blue**, then ←

CV30 Paging Alphanumeric Keys

	Compact Keypads		Rugged Keypads	
To Enter	**3270/5250**	**VT/ANSI**	**3270/5250**	**VT/ANSI**
Page up	Ctrl 8	Ctrl 8	**Blue**, then ↑	**Gold**, then ↑
Page down	Ctrl 2	Ctrl 2	**Blue**, then ↓	**Gold**, then ↓
Page right	Ctrl 6	Ctrl 6	**Blue**, then →	**Gold**, then →
Page left	Ctrl 4	Ctrl 4	**Blue**, then ←	**Gold**, then ←

CV30 VT/ANSI Host Cursor Keys

To Enter	Compact Keypads	Rugged Keypads
Host cursor up key	Alt 8	↑
Host cursor down key	Alt 2	↓
Host cursor right key	Alt 6	→
Host cursor left key	Alt 4	←

CV30 AID-Generating Alphanumeric Keys

	Compact Keypads		Rugged Keypads		
To Enter	**3270/5250**	**VT/ANSI**	**3270**	**5250**	**VT/ANSI**
Clear	Ctrl C	N/A	**Gold**, then C	**Gold**, then 7	N/A
F1	F1	F1	F1	F1	F1
F2	F2	F2	F2	F2	F2
F3	F3	F3	F3	F3	F3
F4	F4	F4	F4	F4	F4
F5	F5	F5	F5	F5	F5
F6	F6	F6	F6	F6	F6
F7	F7	F7	F7	F7	F7
F8	F8	F8	F8	F8	F8
F9	F9	F9	F9	F9	F9
F10	F10	F10	F10	F10	F10

CV30 AID-Generating Alphanumeric Keys (continued)

	Compact Keypads		Rugged Keypads		
To Enter	**3270/5250**	**VT/ANSI**	**3270**	**5250**	**VT/ANSI**
F11	Blue F1	Blue F1	**Blue**, then F1	**Blue**, then F1	**Blue**, then F1
F12	Blue F2	Blue F2	**Blue**, then F2	**Blue**, then F2	**Blue**, then F2
F13	Blue F3	Blue F3	**Blue**, then F3	**Blue**, then F3	**Blue**, then F3
F14	Blue F4	Blue F4	**Blue**, then F4	**Blue**, then F4	**Blue**, then F4
F15	Blue F5	Blue F5	**Blue**, then F5	**Blue**, then F5	**Blue**, then F5
F16	Blue F6	Blue F6	**Blue**, then F6	**Blue**, then F6	**Blue**, then F6
F17	Blue F7	Blue F7	**Blue**, then F7	**Blue**, then F7	**Blue**, then F7
F18	Blue F8	Blue F8	**Blue**, then F8	**Blue**, then F8	**Blue**, then F8
F19	Blue F9	Blue F9	**Blue**, then F9	**Blue**, then F9	**Blue**, then F9
F20	Blue F10	Blue F10	**Blue**, then F10	**Blue**, then F10	**Blue**, then F10
F21	Gold F1	N/A	**Gold**, then F1	**Gold**, then F1	N/A
F22	Gold F2	N/A	**Gold**, then F2	**Gold**, then F2	N/A
F23	Gold F3	N/A	**Gold**, then F3	**Gold**, then F3	N/A
F24	Gold F4	N/A	**Gold**, then F4	**Gold**, then F4	N/A
PA1	Blue I (3270)	N/A	**Gold**, then 1	N/A	N/A
PA2	Blue O (3270)	N/A	**Gold**, then 2	N/A	N/A
PA3	Blue P (3270)	N/A	**Gold**, then 3	N/A	N/A
Help (nonerror)	Blue W (5250)	N/A	N/A	**Gold**, then 8	N/A
Print	Blue Q (5250)	N/A	N/A	**Gold**, then 2	N/A
Record Bksp (Home)	Blue 7 (5250)	Blue 7	N/A	[Home]	N/A
Roll Down	Gold 3 (5250)	N/A	N/A	**Gold**, then 9	N/A
Roll Up	Gold 9 (5250)	N/A	N/A	**Gold**, then 5	N/A

Note: For 3270 and 5250 Computers, pressing **Esc** on the keypad also performs the Reset function.

CV30 VT/ANSI Transmission Mode

To toggle between Line Edit (block) and Character modes, press Blue F1 on the compact keypads, or press **Gold** F1 on the ruggedized keypads.

CV30 Auto-Login Restart

To enter Auto-Login Restart:

- press Gold A on the compact keypad.
- press the **Blue** key, then **Menu** on the ruggedized keypad.

You can also scan the Auto-Login Restart bar code. For a copy of this bar code, see **"Auto-Login Restart" on page 137.**

CV30 Tab Keys - 3270/5250

To Enter	Compact Keypads	Rugged Keypads
Back Tab	**Shift** ⇥	**Shift** ⇥
Forward Tab	⇥	⇥

CV30 3278 SNA Keys

To Enter	Compact Keypads	Rugged Keypads
Clr (E-Inp)	Blue ←	**Blue**, then C
Delete	Alt ←	**Del**
Enter	Enter	Enter
EEOF	Alt E	**Blue**, then E
Home	Blue 7	**Home**
Insert	Blue Space	**Ins**
New Line (Return)	Blue 9	**Enter**
Reset	Blue R	Esc

CV30 5250 Field Exit Key

To Enter	Compact Keypads	Rugged Keypads
Field Exit	FldExit	**Field Exit**

CV30 5250 Signal Keys

To Enter	Compact Keypads	Rugged Keypads
Attn	Alt A	**Attn**
Help	Blue W	**Gold**, then 8

CV30 5250 Special Control Keys

To Enter	Compact Keypads	Rugged Keypads
Del	Alt ←	**Del**
Erase	Blue ←	**Gold**, then 6
Reset	Blue R	Enter
Hex	Alt 5	**Gold**, then X
Home	Blue 7	**Home**
Insert	Blue Space	**Ins**
Caps Lock	Blue **Shift**	**Caps Lock**

CV30 5250 Special Host Key

To Enter	Compact Keypads	Rugged Keypads
Sys Req	Gold S	**Gold**, then 1

CV30 5250 Additional Functions

To Enter	Compact Keypads	Rugged Keypads
¢ (cent sign)	N/A	N/A
↵ (New Line)	Gold 9	Enter
¬ (Not symbol)	**Shift** 6	**Shift** 6
Dup (duplicate enabled fields only)	Gold 5	**Gold**, then 0
Field-	Gold 3	**Gold**, then 3
Field+	Gold 1	**Gold**, then 4
Field Mark	N/A	N/A

CV30 VT/ANSI Standard Keys

To Enter	Press (All Keypads)
0 through 9	0 through 9
Symbols	**Shift** plus corresponding key

CV30 VT/ANSI Function Keys

To Enter	Compact Keypad	Rugged Keypad
Backspace	**Shift** ←	**Shift** ←
Caps Lock	Gold **Shift**	**Caps Lock**
Ctrl	**Ctrl**	**Blue**
Delete	Gold ←	**Del**
Forward Tab	→	→
Return	Enter	Enter
Shift	**Shift**	**Shift**
Space	Space	Space bar

CV30 VT/ANSI Editing Keys

To Enter	Compact Keypad	Rugged Keypad
Find	Gold W	**Gold**, then 4
Ins	Gold Space	**Ins**
NxtSn	Gold .	**Gold**, then 9
PrvSc	Gold ,	**Gold**, then 8
Remove	Gold R	**Gold**, then 6
Select	Gold S	**Gold**, then 7

C

Configuring and Managing the Session Persistence Server

This appendix describes how to configure and manage the Intermec SmartSystems Session Persistence Server. For more information, contact your Intermec representative.

About the Session Persistence Server

The Session Persistence Server supports the Telnet Gateway Appliance (TGAP) Service and UDP Plus Services. It supports VT/ANSI, 5250, and 3270 emulations and provides the following features.

- The ability to configure up to eight different TCP/IP hosts for the various client terminals to connect to.
- The gateway supports up to 1024 clients.
- Allows client session persistence. If an ITE client loses connectivity for any reason (roams out of range, was powered off, or loses battery power), the gateway can keep the client's session alive to its TCP/IP host.

The Session Persistence Server is transparent to both the ITE client and the host. It listens for connections from clients. When a client connects, the gateway establishes and maintains the connection to a host for the client. If the client loses connectivity, the gateway can hold the host connection open until the client can reconnect.

When configuring the ITE client, the following configuration parameters will need to be set.

- Host Name: The IP address of the Smart System server where the TGAP Service is installed
- Port Number: The port number that matches the port number of the host you want to connect to as configured in the Session Persistence Server.
- Emulation: The emulation type (VT/ANSI, 5250, or 3270).
- RTC over TCP must be enabled.

To Install the Session Persistence Server

1. Copy the TGAPServiceInstall.exe onto the desktop of the SmartSystems server that you want to install it on.
2. Run the TGAPServiceInstall application.
3. Ensure that Restart Computer is checked and click **OK**.

After the computer is rebooted, the SmartSystems services should restart automatically along with the Session Persistence Server. If not, they can be restarted manually by right-clicking the SmartSystems icon in the System Tray and selecting **Services** > **Start**.

For more information on configuring TGAP and UDP Plus services, see the Intermec Session Persistence Server Help.

To determine the version of the Session Persistence Server

- In the SmartSystems console, right-click on the LOCALHOST:TGAP service and then select Properties.

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